#### Question (1)

Directions (1-3): In each of the following questions, select the related letter/word/ number from the given alternatives.

# निर्देश(1-3): निम्न प्रत्येक प्रश्न में दिए गए विकल्पों में से सम्बन्धित अक्षर/शब्द/संख्या को च्निए |

Radio: Marconi:: Calculator:?

रेडियो:मारकॉनी:कैल्क्लेटर

- (A) Galileo/गैलीलियो
- (B) Pascal/पास्कल
- (C) Fleming/फ्लेमिंग
- (D) Rutherford/रदरफोर्ड

Correct Option : B

Explanation:

Radio was invented by Marconi and Calculator was invented by Pascal.

## Question (2)

42:32::52:?

(A) 43 (B) 50

(C) 62 (D) 48

Correct Option: B

Explanation:

 $4^2 \times 2 = 32$ 

 $5^2 \times 2 = 50$ 

## Question (3)

RAT: CUP:: SUN:?

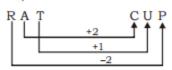
(A) VRQ (B) VOQ

# (C) WOQ (D) VPQ

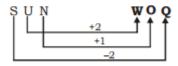
Correct Option : C

Explanation:

As,



Similarly,



# Question (4)

Directions (4 – 6): Find the odd word/letters/ number pair/number from the given alternatives.

निर्देश(4-6): दिए गए विकल्पों में से विषम अक्षर/शब्द/संख्या/युग्म को चुनिए |

- (A) 225 (B) 625
- (C) 64 (D) 144

Correct Option : C

Explanation:

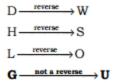
Only 64 is the number whose square root and cube root can be found.

# Question (5)

- (A) DW (B) HS
- (C) LO (D) GU

Correct Option : D

Explanation:



## Question (6)

- (A) January
- (B) Road
- (C) Sky
- (D) Monday

Correct Option : C

Explanation:

Only, Sky is the word without vowels.

# Question (7)

Arrange the words given below in a meaningful sequence.

निम्न शब्दों को एक सार्थक क्रम में व्यवसिथत करें |

- 1. Puberty/यौवन
- 2. Adulthood/वयस्कता
- 3. Childhood/ बचपन
- 4. Infancy/शैशव
- 5. Senescence/बुढ़ापा
- 6. Adolescence/किशोरावस्था
- (A) 2, 4, 6, 3, 1, 5
- (B) 4, 3, 1, 6, 2, 5
- (C) 4, 3, 6, 2, 1, 5

Correct Option: B

#### Question (8)

Directions (8): Two statement is given followed by four conclusions I, II, III and IV. You have to consider the statement to be true, even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

निर्देश (8): दो कथन दिए गए है , जिसके आगे चार निष्कर्ष I,II,III तथा IV है| आपकों कथनों को सत्य मानकर विचार करना है , चाहे वह सामानन्यत : ज्ञात तथ्यों से भित्र प्रतीत होते हों |आपको निर्णय करना है की दिए गए निष्कर्षों में से कौन-सा निश्चित रूप से दिए गए कथनों दुआर सही निकलता है ,यदि कोई हो |

#### Statements/कथन:

Some pens are books./क्छ कलम किताब है |

Some books are pencils./कुछ किताब पेंसिल है |

#### Conclusions/निष्कर्षः

I.Some pens are pencils./ कुछ कलम पेंसिल है |

II. II. Some pencils are pens./ कुछ पेंसिल कलम है |

III. III. All pencils are pens./ सभी पेंसिल कलम है |

IV. IV. All books are pens./सभी किताब कलम है

(A) Only I and III/केवल I और III

(B) Only II and IV/केवल II और IV

(C) All the four/सभी चार

(D) None of the four/चरों में से कोई नहीं

Correct Option : D

#### Question (9)

Which of the following diagrams indicates the best relation between Hospital, Doctor and Patient?

निम्न में से कौन-सी आकृति अस्पताल, डॉक्टर तथा मरीज के बीच संबंध डॉगत करती है?









Correct Option : C Explanation :

Hospital consists of Doctor and Patient, but doctor and patient are two different entity.

## Question (10)

The total of the ages of satyam, shivam and sundram is 80 years. What will the sum of their ages three years hence?

सत्यम,शिवम तथा स्न्दरम के आयु का योग 80 वर्ष है |3 वर्ष पश्चात् उनके कुल आयु का योग क्या होगा ?

(A) 71 years/বর্ष (B) 72 years/বর্ष

(C) 89 years/वर्ष (D) 77 years/वर्ष

Correct Option : C

Explanation:

Required Age =  $80 + (3 \times 3) = 89$ 

#### Question (11)

Introducing Sonia, Aamir says, "She is the wife of only nephew of only brother of my mother." How Sonia is related to Aamir?

सोनिया का परिचय करते हुआ आमिर कहता है,"वह मेरे इकलौटे भाई के इकलौते भांजे की पत्नी है|"सोनिया, आमिर से किस प्रकार संबंधित है ?

- (A) Wife/पत्नी
- (B) Sister/बहन
- (C) Sister-in-law/नन्द
- (D) Data is inadequate/डाटा अपर्याप्त

Correct Option: A

Explanation:

Brother of mother means maternal uncle. Hence, only nephew of Aamir's maternal uncle means Aamir himself. Therefore, Sonia is the wife of Aamir.

## Question (12)

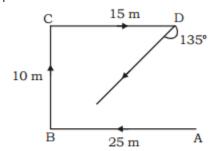
Pihu started walking from her house towards west. After walking a distance of 25 m, she turned right and walked 10 m. She then again turned right and walked 15 m. After this she turns her right at 135° and walked 30 m. In which direction is she going?

पिहू अपने घर में पश्चिम दिशा में चलना प्रारंभ किया |25मि. की दुरी तय करने के बाद, वह दायें मुझे तथा 10 मी. चली | वह फिर से दाएं मुझे तथा 15 मी. चली | उसके पश्चात् अपने दाएं 135° पर मुझे | वह किस दिशा में जा रही है?

- (A) West/पश्चिम
- (B) South/दक्षिण
- (C) South-West/ दक्षिण- पश्चिम
- (D) South-East/ दक्षिण-पूर्व

Correct Option : C

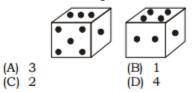
Explanation:



Hence, she is going in the South-West direction.

## Question (13)

Two positions of dice are shown below. How many points will appear on the opposite to the face containing 5 points? नीचे पासे के दो स्थितियों को दर्शाया गया है। 5 बिन्दु वाले सतह के विपरीत कितने बिन्दु आएंगे?



Correct Option : C

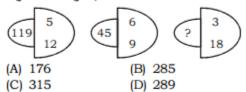
Explanation:

In these two positions one of the common face having 1 point is in the same position. There will be 2 points opposite to the face containing 5 points.

#### Question (14)

Direction (14-16): In question no 14 to 16, select the missing number from the give responses.

निर्देश (14-16) : प्रश्न संख्या 14 से 16 में, दिए गए विकल्पों में सें विलुप्त संख्या चुनिए।



Correct Option: C

Explanation:

$$(12 + 5) (12 - 5) = 17 \times 7 = 119$$

$$(9+6)(9-6) = 15 \times 3 = 45$$

$$(18 + 3) (18 - 3) = 21 \times 15 = 315$$

## Question (15)

2	8	9	7
3	2	1	3
4	7	18	5
216	225	27	?

- (A) 1331
- (C) 1024
- (B) 1728 (D) 256

Correct Option : B

Explanation:

$$(2 + 4)^3 = 6^3 = 216$$

$$(8 + 7)^2 = 15^2 = 225$$

$$(18 + 9)^1 = 27^1 = 27$$

$$(7 + 5)^3 = 12^3 = 1728$$

# Question (16)



- (A) 50
- (C) 60
- 24 27 36
  - (B) 70
  - (D) 20

Correct Option : C

Explanation:

$$4 \times 10 = 40 \Rightarrow HCF (12, 48, 16) = 4$$

$$3 \times 10 = 30 \Rightarrow HCF (24, 27, 36) = 3$$

$$6 \times 10 = 60 \Rightarrow HCF (18, 24, 30) = 6$$

# Question (17)

Count the number of squares in the given figure.

दिए गए आकृति में वर्गों की संख्या ज्ञात करें।



- (A) 32
- (B) 30
- (C) 29
- (D) 28

Correct Option : B

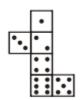
Explanation:

The number of squares in the given figure =  $(1^2 + 2^2 + 3^2 + 4^2) = 30$ 

## Question (18)

When the following figure is folded to form a cube, how many dots will lie opposite the face bearing five dots?

निम्न आकृति को जब घन के रूप में मोड़ा जाएगा, तो पाँच डॉट्स वाले सतह के विपरीत कितने डॉट्स होंगे?



- (A) 1
- (B) 2
- (C) 3
- (D) 4

Correct Option : C

Explanation:

There will be 3 dots opposite to 5 dots.

## Question (19)

Directions (19-20): In the following questions, a series is given with one terms missing. Choose the correct alternative from the given ones that will complete the series:

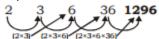
निर्देश(19-20):निम्नलिखित प्रश्नों में, एक अनुक्रम दिया गया है\ जिसमें एक पद लुप्त है|दिए गए विकल्पों में से वह सही विकल्प चुनिए जो अनुक्रम को पूरा करे |

2, 3, 6, 36, \_\_\_\_\_

- (A) 432
- (B) 214
- (C) 1296
- (D) 648

Correct Option : C

Explanation:



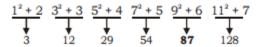
## Question (20)

3, 12, 29, 54, \_\_\_\_, 128

- (A) 76
- (B) 92
- (C) 87
- (D) 111

Correct Option : C

Explanation:



#### Question (21)

A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?

नीचे प्रश्न आकृतियों में दिखाये अनुसार कागज को मोड़कर काटने तथा खोलने के बाद, वह किस उत्तर आकृति जैसे दिखाई देगा?

## Question figures/प्रश्न आकृतियाँ :







Answer figures/उत्तर आकृतियाँ :









Correct Option: C

## Question (22)

If a mirror is placed on the line MN, then which of the answer figures will be the right image of the question figure? यदि दर्पण को रेखा MN पर रखा जाए, तो उत्तर आकृतियों में सें कौन, प्रश्न आकृति का सही प्रतिबिंब होगा?

# Nu56p7uR

- Ru7p65uN (A)
- Nn56p7nR (B)
- Nu56p7uR (2)
- Nu59b7uR (D)

Correct Option: C

## Question (23)

Identify the figure that will complete the pattern.

उस आकृति को पहचाने जो पैटर्न को पूरा करेगी।

# Question figure/प्रश्न आकृतिः



#### Answer figures/उत्तर आकृतियाँ:









Correct Option: C

#### Question (24)

If FRIEND = 56%, LOVE = 54% then ATTITUDE = ?;

यदि FRIEND = 56%, LOVE = 54% तो ATTITUDE = ?

- (A) 83% (B) 100%
- (C) 92% (D) 59%

Correct Option: B

Explanation:

## Question (25)

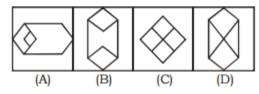
From the given answer figures, select the one in which the question figure is embedded.

दी गई उत्तर आकृतियों में से, उस आकृति को चुनिए जिसमें प्रश्न आकृति अन्तर्निहित है।

#### Question figures/प्रश्न आकृतियाँ :



#### Answer figures/उत्तर आकृतियाँ :



Correct Option: B

#### Question (26)

Two stones of unequal masses are thrown vertically up with the same velocity. Which of the following will happen?

असमान द्रव्यमान वाले दो पत्थर सामान वेग से उधर्वाधर उपर फेंके गए है। निम्नलिखित में से क्या घटित होगा ?

- (A) The heavier mass will reach greater height/भारी द्रव्यमान वाला अधिक ऊँचाई तक जायेगा
- (B) The lighter mass will reach greater height/हल्का द्रव्यमान वाला अधिक ऊँचाई तक जायेगा
- (C) Both will reach the same height/दोनों बराबर ऊँचाई तक जायेगा
- (D) Any of them may reach greater height/उनमे से कोई भी अधिक ऊँचाई तक जा सकता है

Correct Option: C

#### Question (27)

Who has become the first Indian to be elected the President of the International Hockey Federation

#### (FIH)?

किस पहले भारतीय को अंतर्राष्ट्रीय हाँकी महासंध का अध्यक्ष निर्वाचित किए गए ?

- (A) Narinder Batra/नरिंदर बत्रा
- (B) Dhanraj Pillay/धनराज पिल्ले
- (C) K D Singh/के डी सिंह
- (D) Kirtan Singh/कीर्तन सिंह

Correct Option: A

Explanation:

Narinder Batra has become the first Indian to be elected the President of the International Hockey Federation (FIH). He succeeds Spaniard Leandro Negre, who has been the FIH chief since 2008. Batra, who is the president of Hockey India, has become the 12th FIH President and the first Asian to grab the post.

## Question (28)

Wax used for making candle is chemically a mixture of मोमबत्ती बनाने के लिए प्रयुक्त माम रासायनिक दृष्टि से एक मिश्रण है –

- (A) Aliphatic hydrocarbons/ऐलीफैटिक हाईद्रोकर्बनों को
- (B) Aromatic hydrocarbons/ एरोमैटिक हाईद्रोकर्बनों का
- (C) Cyclic hydrocarbons/ साइक्लिक हाईद्रोकर्बनों का
- (D) Aliphatic and aromatic hydrocarbons/ ऐलीफैटिक और एरोमैटिक हाईद्रोकर्बनों का

Correct Option: A

#### Question (29)

Aspirin is chemically known as ,

एस्पिरिन का रासायनिक नाम है -

(A) Methyl salicylate/मिथाइल सैलिसिलेट

- (B) Hydroxysalicylate/हैड्रक्सी सैलिसिलेट
- (C) Acetylsalicylic acid/एसिटिल सैलिसिलेट एसिड
- (D) Alkylsalicylic acid/एलिक्ल सैलिसिलेट एसिड

Correct Option: C

#### Question (30)

Which of the following pairs are correctly matched?

निम्नलिखित में से कौन-से युग्म सही ढंग से सुमेलित नही है?

Idukki/ : Thermal power station/

इडुक्की थर्मल पावर स्टेशन

 Sabarigiri/ : Hydro-electric project/ सबरीगिरी जल विद्युत परियोजना

Ghataprabha/: Irrigation project/

घटप्रभा सिंचाई परियोजना

4. Ramganga/ : Multipurpose project/

रामगंगा बहुउद्देशीय परियोजना

- (A) 2, 3 and 4/2, 3 और 4
- (B) 1, 2, 3 and 4/1, 2, 3 और 4
- (C) 3 and 4/3 और 4
- (D) 1 and 2/1 और 2

Correct Option: A

#### Explanation:

Idukki is a hydro-electric project of Kerala. So, the '1' option is not correct. The Idukki Dam is a double curvature arch dam constructed across the Periyar River in a narrow gorge between two granite hills Kuravan and Kurathi in Kerala, India. At 167.68 metres, it is one of the highest arch dams in Asia. It was constructed and is owned by the Kerala State Electricity Board. It supports a 780 MW hydroelectric power station in Moolamattom, which started generating power on 4 October 1975.

#### Question (31)

About 50% of the world population is concentrated between the latitudes of:

द्निया की आबादी का लगभग 50% हिस्सा किस अंक्षाशों के बीच केन्द्रित है ?

- (A) 5°N and 20° N/5°N और 20° N
- (B) 20°N and 40°N/20°N और 40°N
- (C) 40°N and 60°N/40°N और 60°N
- (D) 20°S and 40°S/20°Sऔर 40°S

Correct Option: B

Explanation:

About 50% of the world population is concentrated between latitude of 20°N and 40°N, because most populous countries like Asia, U.S.A, Europe lie within this latitude.

#### Question (32)

In the given map, which one of the following pairs of ocean currents are shown? दिए गए मानचित्र में निम्नलिखित में से कौन-सा युग्म समुद्री धाराओं को दर्शाता है?



- (A) Benguela and Falkland/बेंगुएल और फॉकलैंड
- (B) Canary and Humboldt/कैनरी और हुम्बबोल्ड्ट
- (C) Agulhas and Guinea/अगुलहास और गिनी
- (D) Benguela and Guinea/बेंगुएल और गिनी

Correct Option: D

Explanation:

Benguela is a cold current flows from south to north along the west coast of Africa. Guinea current is a warm current flowing east of Guinea along the west coast of Africa.

#### Question (33)

Which one of the following Articles of the Indian Constitution provides that 'It shall be the duty of the Union to protect every State against external aggression and internal disturbance'?

भारतीय संबिधान का निम्न में से कौन सा अनुच्छेद प्रदान करता है की 'बहरी आक्रमण और आतंरिक अशांति की दशा में हर राज्य की स्रक्षा करना संध का कर्तव्य है '|

- (A) Article 215/अन्च्छेद 215
- (B) Article 275 अन्च्छेद 275
- (C) Article 325/अन्च्छेद 325
- (D) Article 355/अन्च्छेद 355

Correct Option : D

Explanation:

According Article 355, it shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of this Constitution.

#### Question (34)

Which is the focus country in the 2016 India International Trade Fair (IITF)? भारतीय अंतर्राष्ट्रीय व्यापार मेल (IITF) 2016 में किस देश पर ध्यान केंद्रीत किया है ?

- (A) South Korea/दक्षिण कोरिया
- (B) Belarus/बेलारूस
- (C) Japan/जापान
- (D) Thailand/थाईलैंड

Correct Option : B

Explanation:

The 36th edition of India International Trade Fair (IITF) will be held at Pragati Maidan, New Delhi on 14th November, 2016 and will continue till November 18th, 2016. The fair will be inaugurated by the President of India Pranab Mukherjee with the theme of "Digital India". This year's partner country and states are South Korea and Madhya Pradesh and Jharkhand respectively. The focus country and state are Belarus and Haryana respectively.

#### Question (35)

The Narasimham Committee for financial sector Reforms has suggested reduction in: वित्तीय क्षेत्र में स्धर के लिए नरसिम्हन समिति ने किसे कम करने का स्झाव दिया था ?

- (A) SLR and CRR/SLR और CRR
- (B) SLR, CRR and Priority Sector Financing/ SLR, CRR और प्राथमिक क्षेत्र के वितीयन
- (C) SLR and Financing to capital goods sector/SLR और पूंजीगत वस्त्ओं क्षेत्र के लिए वितीयन
- (D) CRR, Priority Sector Financing and Financing to capital goods sector/CRP, प्राथमिक क्षेत्र के वित्तीयन और पूंजीगत वस्तुओं क्षेत्र के लिए वित्तीयन

Correct Option : B

Explanation:

Narasimham Committee for Financial Sector Reforms (1991) has suggested reduction in SLR, CRR and priority sector financing reducing it from 40% to 10%. Most of the suggestions of the committee were not implemented.

#### Question (36)

The protein part of an enzyme is termed as एक किण्वक के प्रोटीन भाग को क्या कहते हैं ?

- (A) Holoenzyme/होलोएंजाइम
- (B) Ribosome/राइबोजोम
- (C) Prosthetic group/कृत्रिम समूह
- (D) Apoenzyme/एपोएंजाइम

Correct Option : D

## Question (37)

Mongols under Chengiz Khan invaded India during the reign of:

मंगोलों के नेतृत्व में चंगेज खान ने किस के शासनकाल के दौरान भारत में आक्रमण किया था?

- (A) Balban/बलबन
- (B) Firoz Shah Tughlaq/फिरोजशाह त्गलक
- (C) Iltutmish/इल्तुतमिश
- (D) Muhammad Bin Tughlaq/म्हम्मद बिन त्गलक

Correct Option: C

Explanation:

Mongols under Chengiz Khan (died in 1227) invaded India during the reign of Iltutmish (1211-36) but did not enter deep in India as Iltutmish refused to give shelter to the Persian king, Khwarizm Shah, whom Chengiz Khan was chasing.

#### Question (38)

Sellers market denotes a situation where

विक्रेता वज्र एक ऐसा स्थिति को दर्शाता है जहां

- (A) Commodities are available at competitive rates/वास्तुयें प्रतिस्पर्धी दरों पर उपलब्ध है
- (B) Demand exceeds supply/मांग आपूर्ति से अधिक है
- (C) Supply exceeds demand/ आपूर्ति मांग से अधिक है

Correct Option : B

Explanation:

Seller's market is a market which has more buyers than sellers. High prices result from this excess of demand over supply. The opposite of the seller's market is the buyer's market, where supply greatly exceeds demand.

## Question (39)

Janardhan Negi, who passed away recently, was related to which field? जनार्दन नेगी, जिनका हल ही में निधन हो गया है ,वह किस क्षेत्र से जुड़े ह्ए थे ?

- (A) Geophysics/भू-भौतिकी
- (B) Sports/खेल
- (C) Journalism/पत्रकारिती
- (D) Medical/चिकित्सा

Correct Option: A

Explanation:

Noted geophysicist Janardhan G Negi (81) has recently passed away in Hyderabad. He was the former Director-grade scientist at the National Geophysical Research Institute (NGRI). He was known for making outstanding contribution in understanding earthquakes, mass extinctions, especially dinosaurs and the movement of the Indian sub-continental plates

#### Question (40)

Consider the following functionaries:

निम्नलिखित पदाधिकारी पर बिचार करें :

- 1. Cabinet Secretary/कैबिनेट सचिव
- 2. Chief Election Commissioner/मुख्या चुनाव आयुक्त
- 3. Union Cabinet Minister/केन्द्रीय कैबिनेट मंत्री
- 4. Chief Justice of India/भारत के मुख्या न्यायधीश

Their correct sequence in the Order of Precedence is:

अग्रता श्रणी में से सही अनुक्रम में है :

- (A) 3, 4, 2, 1
- (B) 4, 3, 1, 2
- (C) 4, 3, 2, 1
- (D) 3, 4, 1, 2

Correct Option : C

Explanation:

Chief Justice of India, Union Cabinet Minister, Chief Election Commissioner and Cabinet Secretary is the correct order of precedence.

#### Question (41)

Who has become the new Whole-Time Member (WTM) of the Securities and Exchange Board of India (SEBI)?

किस भारतीय प्रतिभृति और विनियम बोर्ड का नया पूर्णकालीन सदस्य बनाया गया है ?

- (A) M M Patel/एम् एम् पटेल
- (B) Niranjan Sahu/निरंजन साह
- (C) Gurumoorthy Mahalingam/ग्रुमूर्ति महालिंगम
- (D) S Raman/एस रमन

Correct Option : C

**Explanation:** 

Gurumoorthy Mahalingam has become the new Whole-Time Member (WTM) of the Securities and Exchange Board of India (SEBI) for a period of 5 years or till the age of 65 years, whichever is earliest. He will get a consolidated salary of Rs 3.75 lakh. Previously, Mahalingam was the executive director and former regional director of Reserve Bank of India (RBI).

#### Question (42)

Flow of blood in dorsal blood vessel of Earthworm is:

केंचुए की पृष्ठीय रुधिर वाहिका में रक्त का प्रवाह किस ओर होता है ?

- (A) Forward/अग्रगामी
- (B) Sideward/पाशर्वम्खी
- (C) Downward/अधोम्खी

#### (D) Backward/पश्चगामी

Correct Option: A

#### Question (43)

Which of the following non-members of Parliament has the right to address it?

निम्नलिखित में से संसद के किस गैर सदस्य को इसे संबंधित करने का अधिकार है ?

- (A) Attorney General of India/ भारत का महान्यायवादी
- (B) Solicitor General of India/ भारत का महान्यायभिकता
- (C) Chief Justice of India/ भारत का म्ख्यन्यायधीश
- (D) Chief Election Commissioner/ मुख्या चुनाव आयुक्त

Correct Option: A

Explanation:

The preamble of the Constitution of India is a brief introductory statement that set out the guiding purpose and principles of the document. As originally enacted the preamble described the state as a 'sovereign democratic republic'. In 1976 the Forty second Amendment changed this to read 'sovereign socialist secular democratic republic'.

#### Question (44)

CAD stands for:

सीएडी किसका स्च्क है ?

- (A) Computer Aided Design
- (B) Computer Automatic Design
- (C) Computer Aided Decode
- (D) Computer Automatic Decode

Correct Option: A

#### Question (45)

```
Match List-I with List-II and select the
correct answer:
सूची-I को सूची-II से सुमेलित कर सही उत्तर का चयन करें।
    List-I/सूची-I
                          List-II/सूची-II
    (Item in the
                     (Country from which it
    Indian Constitution)/ was derived)/
    (भारतीय संविधान में (देश, जहाँ से इसे प्राप्त किया गया
    विषय)
                     है)
a. Directive Principles 1. Australia/
    of State Policy/राज्य के
    नीति निर्देशक सिद्धांत
b. Fundamental Rights/ 2. Canada/
    मौलिक अधिकार
                               कनाडा

 c. Concurrent List in 3. Ireland/

                               आयरलैंड
    Union-State Relations/
    समवर्ती सूची संघ राज्य संबंधी
d. India as a Union of 4. United
    States with greater
                               Kingdom/
                               यूनाइटेड किंगडम
    powers to the Union/
    राज्य के संघ कि अधिक से 5. United States
    अधिक शक्तियों के साथ संघ
                               of America/
    के रूप में भारत
                               सयुंक्त राज्य अमेरिका
```

#### Codes/क्टः

a b c d (A) 5 4 1 2 (B) 3 5 2 1 (C) 5 4 2 1 (D) 3 5 1 2

Correct Option: D

#### Question (46)

The book "SRK - 25 Years of a Life" has been authored by whom? प्रतक "एसआरके-25 इयर्स आफ अ लाइफ" किसके द्आर लिखी गयी है?

A) Samar Khan/समर खान

- (B) R K Kapoor/आर के कपूर
- (C) Sonali Kokra/सोनाली कोकर
- (D) Omang Tripathi/उमंग त्रिपाठी

Correct Option: A

Explanation:

The book "SRK - 25 Years of a Life" has been authored by writer and filmmaker Samar Khan. The book traces the journey of the Bollywood superstar Shah Rukh Khan through all his directors' eyes. The thought behind the book was to show why his directors thought of such iconic characters for Shah Rukh.

#### Question (47)

The centre of gravity of a sprinter during the race lies दौड़ के दौरान धावक का ग्रुत्व केंद्र होता है –

- (A) Ahead of his feet/उसके पैरों के आगे
- (B) Behind his feet/ उसके पैरों के पीछे
- (C) At the centre of the body/शारीर के मध्य में
- (D) To the left side of the body/शारीर के बाई ओर

Correct Option: A

#### Question (48)

Which vitamin deficiency causes the cracking of lips' corners?

किस विटामिन के कमी से मरीज के होठ कोने से फट जाते है ?

- (A) Vitamin A/ विटामिन A
- (B) Vitamin C/ विटामिन C
- (C) Vitamin B2/ विटामिन B2

(D) Vitamin B12 विटामिन B12

Correct Option: C

Question (49)

Assertion (A): The origin of feudal system in ancient India can be traced to military campaigns.

Reason (R): There was considerable expansion of the feudal system during the Gupta period

कथन (A): प्राचीन भारत में जागीर संबंधी व्यवस्था की उत्पत्ति से सैन्य अभियानों का पता लगाया जा सकता है।

कारण (R): गृप्त कल के दौरान जागीर संबंधी व्यवस्था का काफी विस्तार किया गया था |

(A) Both A and R are true but R is the correct explanation of A/ A और R सत्य है लेकिन R का A से सही

स्पष्टीकरण है।

(B) Both A and R are true but R is not a correct explanation of A// A और R सत्य है लेकिन R का A

से सही स्पष्टीकरण है।

(C) A is true but R is false/A सत्य है लेकिन R गलत हैं

(D) A is false but R is true/ A गलत हैं लेकिन R सत्य है

Correct Option: B

Explanation:

Both the statements are true but do not explain each other.

Question (50)

The term 'Aryan' denotes:

शब्द "आर्यन " को दर्शाता है -

(A) An ethnic group/एक जातीय समृह को

(B) A nomadic people/खानाबदोश लोगों को

(C) A speech group/एक भाषण समूह को

(D) None of these/इनमे से कोई नहीं

Correct Option : C

Explanation:

Aryan is in fact a linguistic term indicating a speech group of Indo-European origin, and is not an ethnic term.

## Question (51)

The ratio of two numbers is 5 : 6, when the first is increased by 20% and the second is decreased by 20%, then the ratio of the resulting numbers is:

दो संख्याओं का अनुपात 5:6 है| जब पहली संख्या 20% बढाई जाती है तथा दूसरी संख्या 20% घटायी जाती है, तो अब नया अनुपात क्या होगा?

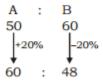
(A) 4:5 (B) 5:4

(C) 5:6(D) 6:5

Correct Option : B

Explanation:

Let the numbers are 50 and 60 respectively.



∴ Required ratio = 60 : 48 = 5 : 4

#### Question (52)

A loss of 20% gets converted into a profit of 15% when the selling price of an article is increased by Rs.105. Find the cost price of the article

जब एक वस्तु के विक्रय मूल्य में 105 की वृद्धि होती है| तो 20% हानि 15% लाभ में परिवर्तित हो जाती है| वस्तु का लागत मूल्य ज्ञात करें|

- (A) Rs.100 (B) Rs.300
- (C) Rs.200 (D) Rs.250

Correct Option: B

Explanation:

(B) Let 
$$SP = 100$$

## Question (53)

A book is listed at ₹ 1,400 and the discount offered is 10%. What additional discount must be given to bring the net selling price to ₹ 1,200?

किसी वस्तु का ऑकित मूल्य ₹ 1,400 है और 10% की छूट दी जाती है। इस वस्तु को ₹ 1,200 में बेचने के लिए कितनी अतिरिक्त छूट देनी चाहिए?

(A) 
$$16\frac{2}{3}\%$$

(C) 
$$4\frac{16}{21}\%$$

Correct Option : C

Explanation:

(C) Listed price = ₹ 1400

After 1st discount

$$=\frac{90}{100}\times1400$$

Additional discount %

$$=\frac{1260-1200}{1260}\times100$$

$$= \frac{100}{21}\% = 4\frac{16}{21}\%$$

## Question (54)

A man loses Rs.75 per year when the annual rate of interest falls from 11.5% to 10%. His captial (in Rs.) is:

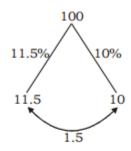
वार्षिक ब्याज की दर 11.5% से 10% हो जाने पर किसी व्यक्ति को 75रु की वार्षिक हानि हो जाती है। उसकी पूंजी (रु में) है-

- (A) Rs.3700 (B) Rs.7400
- (C) Rs.8325 (D) Rs.5000

Correct Option: D

Explanation:

Let the sum = 100 units



According to question,

: 1.5 units = 75

$$\therefore 1 \text{ unit} = \frac{75}{1.5}$$

∴ 100 units = 
$$\frac{75}{1.5}$$
 × 100 = ₹ 5000

# Question (55)

When principal = ₹ S, rate of interest = 2r% p.a, then a person will get after 3 years at compound interest

यदि मूल राशि = ₹ S, ब्याज दर = 2r% प्रतिवर्ष, तो व्यक्ति को चक्रवृद्धि ब्याज पर 3 वर्ष के बाद कितनी राशि मिलेगी?

(A) ₹ 
$$\frac{6 \text{ Sr}}{100}$$

(A) 
$$\not\equiv \frac{6 \, \text{Sr}}{100}$$
 (B)  $\not\equiv \text{S} \left( 1 + \frac{r}{50} \right)^3$ 

(C) 
$$\notin S\left(1 + \frac{r}{100}\right)^3$$
 (D)  $\notin 3S\left(1 + \frac{r}{100}\right)^3$ 

$$7 = 3 \cdot \left(1 + \frac{r}{100}\right)^3$$

Correct Option: B

Explanation:

(B) According to the question,

Principal = ₹ S

Rate = 2r% p.a

Time = 3 years

$$\therefore A = P \left( 1 + \frac{R}{100} \right)^T$$

$$A = S \left( 1 + \frac{2r}{100} \right)^3$$

$$A = S\left(1 + \frac{r}{50}\right)^3$$

## Question (56)

The sum of three numbers is 196. If the ratio of the first to the second is 2 : 3 and that of the second to the third is 5 : 8, thenthe second number is:

तीन संख्याओं का योग 196 है। यदि पहली और दूसरी संख्या 2:3 के अनुपात में तथा दूसरी और तीसरी संख्या का अनुपात 5:8 है, तो दूसरी संख्या ज्ञात करें।

(A) 60 (B) 48

(C) 30 (D) 20

Correct Option: A

Explanation:

(A) 
$$A + B + C = 196$$

$$10x + 15x + 24x = 49x$$

$$49x = 196$$

$$x = 4$$

: second number (B)

$$= 4 \times 15$$

A and B have their monthly incomes in the ratio 8 : 5 while their monthly expenditure are in the ratio 5 : 3. If they have saved Rs.12,000 and Rs.10,000 monthly respectively, then the difference in their monthly incomes is:

A और B की मासिक आय 8:5 के अनुपात में है जबिक उनका मासिक व्यय 5:3 के अनुपात में हैं। यदि उन्होंने क्रमश: 12,000रु और 10,000रु की बचत की हो, तो उनकी मासिक आय में अंतर कितना है?

- (A) Rs. 42,000
- (B) Rs. 52,000
- (C) Rs. 46,000
- (D) Rs. 44,000

Correct Option: A

Explanation:

(A) Let their monthly income be ₹ 8x and ₹ 5x According to the question

$$\frac{8x - 12000}{5x - 10000} = \frac{5}{3}$$

$$\Rightarrow 24x - 36000 = 25x - 50000$$

$$x = 14000$$

Difference in monthly income

$$8x - 5x = 3x$$
  
 $x = 14000$   
∴  $3x = 14000 \times 3$   
 $= ₹ 42,000$ 

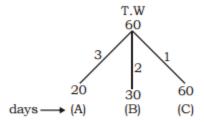
## Question (58)

A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?

A, B और C किसी काम को क्रमश: 20, 30 तथा 60 दिनों में खत्म करते हैं| तो A कितने दिनों में काम खत्म करेगा यदि B तथा C प्रत्येक तीसरे दिन काम में उसकी सहायता करेंगे?

- (A) 10 days/दिन
- (B) 12 days/दिन
- (C) 15 days/दिन
- (D) 20 days/दिन

Correct Option : C Explanation :



in 3 days cycle total work done is

= 3 + 3 + 6 = 12 units

work will be completed in =  $\frac{60}{12}$  = 5 cycles

1 cycle  $\rightarrow$  3 days

 $5 \text{ cycle} \rightarrow 3 \times 5 = 15 \text{ days}$ 

## Question (59)

A tap drips at a rate of one drop/sec. 60 drops make 10 ml. the number of litres wasted in 300 days is:

एक नल से एक बूंद प्रति सेकंड की दर से टपकती है| 60 बूंदे मिलकर 10 मिलीलीटर बनाती है| 300 दिन में कितने लीटर पानी बेकार गया?

- (A) 4320000 ml/मिली.
- (B) 432000 ml/मिली.
- (C) 43200 ml/मिली.
- (D) 4320 ml/मिली.

Correct Option: D

Explanation:

1 sec → 1 drop

No. of second in 300 days (24 hrs × 60 min × 60 sec) × 300 days

No. of litres wasted

 $\frac{300 \times 24 \times 60 \times 60}{6 \times 1000} \text{ litres}$ 

= 4320 litres

## Question (60)

A train 800 m long is running at the speed of 78 km/hr. If it crosses a tunnel in 1 minutes, then the length of the tunnel (in meters) is:

एक 800 मी. लम्बी रेलगाड़ी 78 किमी/घंटा की गति से चलते हुए एक सुरंग को 1 मिनट में पार कर लेती है| बतायें कि उस सुरंग की लम्बाई (मी. में) कितनी होगी?

- (A) 77200 m/却. (B) 500 m/却.
- (C) 1300 m/मी. (D) 13 m/मी.

Correct Option : B Explanation :

Speed = 78 km/hr

- $=\frac{78}{60} \times 1000 \text{ m/min}$
- = 1300 m/min

Distance travelled in 1 min

- = 1300 m
- = 1300 = l+800

l = 500 m

length of tunnel is 500 m

#### Question (61)

Speed of a boat is 5 km per hour in still water and the speed of the stream is 3 km per hour. If the boat takes 3 hours to go to a place and come back, the distance of the place is:

शांत जल में नाव की गति 5 किमी/घंटा है तथा धारा की गति 3 किमी/घंटा है। यदि नाव 3 घंटा में किसी दूरी तक जाकर वापस आ जाता है, तो दूरी जात करें।

- (A) 3.75 km/किमी. (B) 4 km/किमी.
- (C) 4.8 km/किमी. (D) 4.25 km/किमी.

Correct Option : C

Explanation:

Speed of boat in still water, x = 5 km/hrSpeed of stream, y = 3 km/hr

According to question,

$$\frac{\text{Distance}}{8} + \frac{\text{Distance}}{2} = 3 \text{ hrs}$$

$$\frac{D}{8} + \frac{D}{2} = 3$$

$$\Rightarrow \frac{5D}{8} = 3$$

$$D = \frac{24}{5} = 4.8 \text{ km}$$

## Question (62)

Find the value of  $\frac{1}{5}$  + 999 $\frac{494}{495}$  × 99.

$$\frac{1}{5}$$
 + 999 $\frac{494}{495}$  × 99 का मान ज्ञात करें।

- (A) 90000
- (B) 99000
- (C) 90900
- (D) 99990

Correct Option : B

Explanation:

$$\frac{1}{5}$$
 + 999  $\frac{494}{495}$  × 99

$$=\frac{1}{5}+\left[999+\frac{494}{495}\right]\times99$$

$$= \frac{1}{5} + \left(1000 - \frac{1}{495}\right) \times 99$$

$$= \frac{1}{5} + 99000 - \frac{1}{5}$$

= 99000

## Question (63)

The value of  $\frac{8}{9} \times \frac{3}{\frac{5}{6} \div \frac{2}{3} \text{ of } 1\frac{1}{4}$ .

$$\frac{8}{9} \times \frac{3}{\frac{5}{6} \div \frac{2}{3} \text{ का } 1\frac{1}{4}}$$
 का मान क्या है?

- (A) 2
- (B) 1
- (C)  $\frac{7}{3}$  (D)  $\frac{8}{3}$

Correct Option: D

**Explanation:** 

According to the question,

$$\frac{8}{9} \times \frac{3}{\frac{5}{6} \div \frac{2}{3} \text{ of } 1\frac{1}{4}}$$

$$=\frac{8}{9}\times\frac{3}{\frac{5}{6}\div\left(\frac{2}{3}\times\frac{5}{4}\right)}$$

$$=\frac{8}{9}\times\frac{3}{\frac{5}{6}\div\frac{5}{6}}$$

$$=\frac{8}{9}\times\frac{3}{1}=\frac{8}{3}$$

# Question (64)

Find the minimum value of 9  $sec^2 \theta + 4$ cosec<sup>2</sup> θ.

 $9 \sec^2 \theta + 4 \csc^2 \theta$  का न्यूनतम मान ज्ञात करें।

- (A) 25
- (B) 35
- (C) 45
- (D) 20

Explanation:

$$9 \sec^2 \theta + 4 \csc^2 \theta$$

$$((\sqrt{9}) + (\sqrt{4}))^2 \qquad \left( \begin{array}{c} \because a \sec^2 \theta + b \csc^2 \theta \\ \min = (\sqrt{a} + \sqrt{b})^2 \end{array} \right)$$

$$= 9 + 4 + 2\sqrt{9 \times 4}$$

$$= 13 + 12$$

= 25

## Question (65)

Find the value of 5  $\sin^2 \theta + 2 \cos^2 \theta +$ 

$$\frac{3}{1+\tan^2\theta}$$
.

$$5 \sin^2 \theta + 2 \cos^2 \theta + \frac{3}{1 + \tan^2 \theta}$$
 का मान ज्ञात करें।

Correct Option : A

Explanation:

(A) 
$$5 \sin^2 \theta + 2 \cos^2 \theta + \frac{3}{1 + \tan^2 \theta}$$

$$\Rightarrow 5 \sin^2 \theta + 2 \cos^2 \theta + \frac{3}{\sec^2 \theta}$$

= 
$$5 \sin^2 \theta + 2 \cos^2 \theta + 3 \cos^2 \theta$$

= 
$$5 \sin^2 \theta + 5 \cos^2 \theta$$

$$= 5(\sin^2\theta + \cos^2\theta)$$

$$(\because \sin^2\theta + \cos^2\theta = 1)$$

#### Question (66)

If a - b = 6, b - c = -2 and c - a = -4 then, find

the value of 
$$\frac{a^3 + b^3 + c^3 - 3abc}{a + b + c}$$
.

यदि 
$$a - b = 6$$
,  $b - c = -2$  तथा  $c - a = -4$  तो,

$$\dfrac{a^3+b^3+c^3-3abc}{a+b+c}$$
 का मान ज्ञात करें।

- (A) 28
- (B) 36
- (C) 32
- (D) 24

Correct Option: A

Explanation:

(A) Given

$$a-b=6$$

$$b - c = -2$$

$$c - a = -4$$

We know that

$$a^3 + b^3 + c^3 - 3abc = \frac{1}{2}(a + b + c)((a - b)^2 + b^2)$$

$$(b-c)^2 + (c-a)^2$$

$$\frac{a^3 + b^3 + c^3 - 3abc}{a + b + c} = \frac{1}{2} ((a - b)^2 + (b - c)^2 + (c - b)^2)$$

 $a)^{2}$ 

$$= \frac{1}{2}(6^2 + (-2)^2 + (-4)^2)$$

$$=\frac{1}{2}(36+4+16)=28$$

# Question (67)

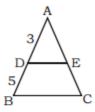
In a  $\Delta ABC$ , DE | |BC and the ratio of AD and BD is 3 : 5. Find the ratio of area of  $\Delta ABC$  and area of trapezium DBCE.

त्रिभुज ABC में, भुजा DE||BC है तथा भुजा AD और BD का अनुपात 3:5 है। त्रिभुज ABC और समलम्ब चतुर्भुज DBCE के क्षेत्रफल का अनुपात ज्ञात करें।

- (A) 64:55
- (B) 55:64
- (C) 32:27
- (D) 27:32

Correct Option: A

# Explanation:



Area of trapezium

= Area of ΔABC - Area of ΔADE

So ratio = 64 : 55

# Question (68)

If  $x - \frac{1}{x} = \sqrt{12}$ , then find the value of

$$\frac{x^5 + \frac{1}{x}}{x^4 + 1}$$

यदि  $x - \frac{1}{x} = \sqrt{12}$  है, तो  $\frac{x^5 + \frac{1}{x}}{x^4 + 1}$  का मान ज्ञात करें।

(A) 
$$\frac{26}{7}$$
 (B)  $\frac{25}{8}$ 

(B) 
$$\frac{25}{8}$$

(C) 
$$\frac{32}{7}$$
 (D)  $\frac{33}{7}$ 

(D) 
$$\frac{33}{7}$$

Correct Option: A

Explanation:

(A) 
$$x - \frac{1}{x} = \sqrt{12}$$

so 
$$x + \frac{1}{x} = \sqrt{12 + 4} = 4$$

$$\frac{x^5 + \frac{1}{x}}{x^4 + 1} = \frac{x^2 \left(x^3 + \frac{1}{x^3}\right)}{x^2 \left(x^2 + \frac{1}{x^2}\right)}$$

$$=\frac{x^3 + \frac{1}{x^3}}{x^2 + \frac{1}{x^2}} = \frac{64 - 12}{14} = \frac{52}{14} = \frac{26}{7}$$

## Question (69)

A metallic sphere of radius 10.5 cm is melted and then recast into small cones each of radius 3.5 cm and height 3 cm. The number of cones thus formed is:

10.5 सेमी. त्रिज्या वाले धातु के गोले को पिघलाकर 3.5 सेमी. त्रिज्या वाले तथा 3 सेमी. ऊँचाई वाले शंकुओं में परिवर्तित किया गया। शंकुओं की संख्या ज्ञात करे।

- (A) 140
- (B) 132
- (C) 112
- (D) 126

Correct Option : D

Explanation:

Number of cones

$$= \frac{\text{Volume of sphere}}{\text{Volume of cone}}$$

$$= \frac{\frac{4}{3}\pi(10.5)^3}{\frac{1}{3}\pi(3.5)^2 \times 3}$$

$$= \frac{4 \times 10.5 \times 10.5 \times 10.5}{3.5 \times 3.5 \times 3} = 126$$

# Question (70)

If  $a = 3 + 2\sqrt{2}$  and ab = 1, then find the

value 
$$\frac{a^2 + 3ab + b^2}{a^2 - 3ab + b^2}$$
.

यदि 
$$a = 3 + 2\sqrt{3}$$
 और  $ab = 1$ , तो  $\frac{a^2 + 3ab + b^2}{a^2 - 3ab + b^2}$ 

- (A)  $\frac{31}{37}$  (B)  $\frac{41}{35}$
- (C)  $\frac{37}{31}$  (D)  $\frac{35}{41}$

Correct Option: C

Explanation:

(C) 
$$a = 3 + 2\sqrt{3}$$

$$b = \frac{1}{3 + 2\sqrt{2}} = 3 - 2\sqrt{2} = \frac{1}{a}$$

$$a + b = a + \frac{1}{a} = 6$$

$$\therefore a^2 + \frac{1}{a^2} = 6^2 - 2 = 34$$

$$\therefore \frac{a^2 + 3ab + b^2}{a^2 - 3ab + b^2} = \frac{a^2 + b^2 + 3ab}{a^2 + b^2 - 3ab}$$

$$=\frac{a^2 + \frac{1}{a^2} + 3}{a^2 + \frac{1}{a^2} - 3} = \frac{34 + 3}{34 - 3} = \frac{37}{31}$$

# Question (71)

The area of a circle is half when its radius is decreased by n. Find its radius. एक वृत्त का क्षेत्रफल आधा हो जाता है जब इसकी त्रिज्या n कम कर दी जाती है। उसकी त्रिज्या ज्ञात करें।

(A) 
$$\frac{\sqrt{2}n}{\sqrt{2}-1}$$
 (B)  $\frac{4}{7}$ 

(B) 
$$\frac{4}{7}$$

(C) 
$$\frac{\sqrt{4}n}{\sqrt{2}-1}$$
 (D)  $\frac{\sqrt{2}n}{\sqrt{4}-1}$ 

(D) 
$$\frac{\sqrt{2}n}{\sqrt{4}-1}$$

Correct Option: A

Explanation:

(A) 
$$\frac{1}{2} \times \pi r^2 = \pi (r - n)^2$$

$$\Rightarrow \frac{1}{2} r^2 = (r - n)^2$$

$$\Rightarrow$$
 r =  $\sqrt{2}$  (r - n)

$$\Rightarrow$$
 r =  $\sqrt{2}$  r -  $\sqrt{2}$ n

$$\Rightarrow$$
 r( $\sqrt{2}$  - 1) =  $\sqrt{2}n$ 

$$\Rightarrow r = \frac{\sqrt{2}n}{\sqrt{2}-1}$$

# Question (72)

Area of two similar triangles are 196 cm2 and 256 cm2 respectively. If shortest side of the smaller triangle is 7 cm, find the shortest side of the larger triangle.

दो समरूप त्रिभुजों के क्षेत्रफल क्रमश: 196 वर्ग सेमी तथा 256 वर्ग सेमी है। यदि छोटे त्रिभुज की सबसे छोटी भुजा 7 सेमी. की है, तो बड़े त्रिभ्ज की सबसे छोटी भ्जा ज्ञात करें।

- (A) 14 cm/सेमी.
- (B) 16 cm/सेमी.
- (C) 8 cm/सेमी.
- (D) 10 cm/सेमी.

Correct Option: C

Explanation:

(C) Let the required side of triangle be x cm.

So, 
$$\frac{x^2}{7^2} = \frac{256}{196}$$

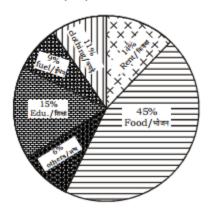
$$x^2 = \frac{49 \times 256}{196}$$

$$x = 8 \text{ cm}$$

### Question (73)

Direction (73-75): The pie chart given below shows the spendings of a family on various heads during a month. Study the graph and answer the following questions.

निर्देश (73-75): नीचे दिया गया पाई चार्ट एक परिवार के विभिन्न मदों पर एक महीने में हुए खर्च को दर्शाता है। ग्राफ का अध्ययन कर नीचे दिए गए प्रश्नों के उत्तर दें।



If the total income of the family is Rs.50,000, then the amount spent on Rent and Food together is: यदि परिवार की कुल आय 50,000 है, तो किराया और भोजन पर कुल खर्च की गई राशि है-

- (A) Rs.17,250
- (B) Rs.14,750
- (C) Rs.11,250
- (D) Rs.29,500

Correct Option : D

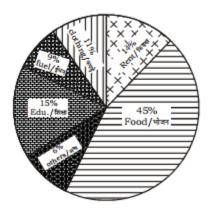
Explanation:

∴ 59% = 
$$\frac{50,000}{100}$$
 × 59 = ₹ 29,500

## Question (74)

Direction (73-75): The pie chart given below shows the spendings of a family on various heads during a month. Study the graph and answer the following questions.

निर्देश (73-75): नीचे दिया गया पाई चार्ट एक परिवार के विभिन्न मदों पर एक महीने में हुए खर्च को दर्शाता है। ग्राफ का अध्ययन कर नीचे दिए गए प्रश्नों के उत्तर दें।



What is the ratio of the expenses on Education to the expenses on Food?

शिक्षा पर किए गये व्यय का भोजन पर किए गये व्यय से क्या अन्पात है?

- (A) 1:3
- (B) 3:1
- (C) 3:5
- (D) 5:3

Correct Option : A

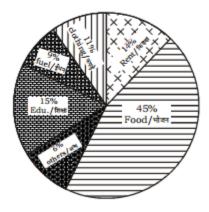
Explanation:

Required ratio = 15:45=1:3

## Question (75)

Direction (73-75): The pie chart given below shows the spendings of a family on various heads during a month. Study the graph and answer the following questions.

निर्देश (73-75): नीचे दिया गया पाई चार्ट एक परिवार के विभिन्न मदों पर एक महीने में हुए खर्च को दर्शाता है। ग्राफ का अध्ययन कर नीचे दिए गए प्रश्नों के उत्तर दें।



Expenditure on Rent is approximately what percent of expenditure on Fuel?

किराये पर व्यय, ईंधन पर व्यय का लगभग कितना प्रतिशत है?

- (A) 135%
- (B) 156%
- (C) 167%
- (D) 172%

Correct Option: B

Explanation:

Required percentage =  $\frac{14}{9} \times 100 = 156\%$ 

### Question (76)

Direction: In Question nos. 76 to 78 some part of the sentences have errors and some are

correct. Find out which part of a sentence has an error and blacken the oval corresponding to the appropriate letter (A), (B), (C). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet.
Mohan as well as (A)/ his sons and daughters (B)/ like to curry favour with the boss and his family members. (C)/ No error (D)
Correct Option : C
Question (77)
The number of people (A)/ who own personal computer are (B)/ increasing every year. (C)/ No error (D)
Correct Option : B
Question (78)
The Supreme Court said that the election (A)/ Commission could enquire into complaints of (B)/ paid news against a political leader if the expenditure incurred on it is not disclosed. (C)/ No error (D)
Correct Option : C
Question (79)
Directions: In Question nos. 79 to 81, sentences given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval [] in the Answer Sheet.
Some experts believe that we must change our criminal codes to to new concepts of punishment.
(A) confirm (B) conform
(C) perform (D) incur

Correct Option : B
Question (80)
The Delhi Police set the to arrest the criminal.
(A) bait (B) conspiracy
(C) bet (D) protocol
Correct Option : A
Question (81)
It is not always that a work of non-fiction, the title and topic be, goes into a second print within a year of its publication.
(A) however current and relevant
(B) moreover current and relevant
(C) howsoever
(D) notwithstanding anything in
Correct Option : A
Question (82)
Directions : In question nos. 82 to 83, out of the four alternatives, choose the one which best expresses the meaning of the given word.
INNATE
(A) inborn (B) acquired
(C) mutated (D) prenatal

Correct Option : A

# Question (83)

### **PURLOIN**

- (A) steal (B) demand
- (C) request (D) like a lion

Correct Option : A

## Question (84)

Directions : In question nos. 84 to 85, choose the word opposite in meaning to the given word.

**INCARCERATE** 

- (A) release
- (B) impound
- (C) imprison
- (D) detain

Correct Option : A

# Question (85)

**BLANDISH** 

- (A) wheedle
- (B) cajole
- (C) discourage
- (D) entice

Correct Option: C

### Question (86)

Directions: In question nos. 86, four words are given in each question, out of which only one word is spelt correctly/wrongly out of them. Find the word spelt correct/wrong and mark your answer in the Answer Sheet.

- (A) Consignment
- (B) Entreperneur
- (C) Invincible
- (D) Bureaucrats

Correct Option: B

### Question (87)

Direction: In Question nos. 87 to 89, four alternative are given for the Idiom/Phrase in bold in below sentences. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

Deepak did not care for his family; he wanted to gather roses only.

- (A) to save money miserly
- (B) to paint a rosy picture of the past
- (C) to seek all enjoyments of life
- (D) to obtain fame by hard work

Correct Option: C

#### Question (88)

Raman is *a close-fisted person* when it comes to investment.

- (A) A powerful person
- (B) A miser
- (C) A close friend
- (D) A cowardly person

### Question (89)

Suddenly *the balloon goes* up in the middle of the conversation.

- (A) the situation turns unpleasant or serious
- (B) a sudden shift in the topic of conversation
- (C) the conversation takes a lighter note
- (D) an abrupt silence takes place

Correct Option: A

### Question (90)

Direction: In Question nos. 90 to 92, a sentence/ a part of the sentence is italicized in underlined. Below are given alternatives to the italicised part at (A), (B), (C) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (D). Mark your answer in the Answer Sheet.

Unless she does not work day and night with interest, her work will remain incomplete.

- (A) Unless she works day and night interestingly
- (B) Unless she does not work day or night from interest
- (C) Unless she works day and night with interest
- (D) No improvement

Correct Option: C

#### Question (91)

We could scarcely hear what he said, could we?

- (A) couldn't we?
- (B) can we?

- (C) shouldn't we?
- (D) No improvement

Correct Option: D

## Question (92)

What *does irritate me most* is not this opinion, but the absurd logic behind it.

- (A) most irritating me
- (B) irritates me the most
- (C) irritating me the most
- (D) No improvement

Correct Option: B

## Question (93)

Direction: In Question nos. 93 to 95, in the following question, out of the four alternatives, choose the one which can be substituted for the given sentence.

People of no fixed abode

- (A) Barbarians
- (B) Nomads
- (C) Vagabonds
- (D) Travelers

Correct Option : B

### Question (94)

Code of diplomatic etiquette and precedence

- (A) Formality
- (B) Statesmanship

- (C) Protocol
- (D) Hierarchy

Correct Option: C

### Question (95)

That which makes it difficult to recognize the presence or real nature of something

- (A) Camouflage
- (B) Transparent
- (C) Infallible
- (D) Image

Correct Option: A

### Question (96)

Direction (Q. No- 96 - 100): In these question you have two brief passages with six questions following the passage. Read the passage carefully and choose the best answer to each question out of the four alternatives.

#### Passage - 1

A man may usually be known by the book she reads as well as by the company he keeps, for there is a companionship of books as well as of men and one should always live in the best company whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness, arousing and interesting us in youth, comforting and consoling us in age.

According to the passage, "A man may be known by the books he reads", because

- (A) his reading habit shows that he is a scholar.
- (B) the books he reads affects his thinking and character.
- (C) books provide him a lot of information.
- (D) his selection of books generally reveals his temperament and character.

Correct Option : D

#### Question (97)

A man may usually be known by the book she reads as well as by the company he keeps, for there is a companionship of books as well as of men and one should always live in the best company whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness, arousing and interesting us in youth, comforting and consoling us in age.

Which of the following statements is not true?

- (A) Good books and good men provide good company.
- (B) A good book never betrays us.
- (C) Sometimes we may have to be patient with a book as it may bore us.
- (D) A good book serves as a permanent friend.

Correct Option: C

#### Question (98)

A man may usually be known by the book she reads as well as by the company he keeps, for there is a companionship of books as well as of men and one should always live in the best company whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness, arousing and interesting us in youth, comforting and consoling us in age.

The statement "A good book may be among the best of friends" means

- (A) a good book is the worst enemy.
- (B) books may be good friends, but not better than good men.
- (C) a good book can be included among the best friends of mankind.
- (D) Our friends read the same good books.

Correct Option: C

#### Question (99)

A man may usually be known by the book she reads as well as by the company he keeps, for there is a companionship of books as well as of men and one should always live in the best company whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness, arousing and interesting us in youth, comforting and consoling us in age.

Which one of the following would be the most suitable title for the passage?

- (A) Books show the reader's character
- (B) Books as man's abiding friends
- (C) Books are useful for our youth
- (D) Importance of books in old age

Correct Option: B

#### Question (100)

A man may usually be known by the book she reads as well as by the company he keeps, for there is a companionship of books as well as of men and one should always live in the best company whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness, arousing and interesting us in youth, comforting and consoling us in age.

A book is a/an

- (A) adversary (B) critic
- (C) companion (D) burden

Correct Option: C

## Question (101)

Directions (1 - 4): In each of the following questions, select the related letter/word/ number from the given alternatives.

# निर्देश (1-4): निम्न प्रत्येक प्रश्न में दिए गए विकल्पों में से सम्बन्धित अक्षर/शब्द/संख्या को च्निए

Rain: Umbrella:: Flood:?

वर्षा : छाता : : बाढ़ : ?

(A) Bridge/पुल (B) Electricity/बिजली

(C) Dam/बाँध (D) Water/पानी

Correct Option : C Explanation :

Umbrella protects us from rain. Similarly, dam checks flood.

## Question (102)

Man: House::?

मनुष्य : घर : : ?

(A) Cat : Mouse/बिल्ली : चूहा

(B) Beast : Den/जानवर : माँद

(C) Tree : Plant/पेड़ : पौधा

(D) Cage : Rat/पिंजरा : चूहा

Correct Option: B

Explanation:

Man lives in house. Similarly, Beast lives

in den.

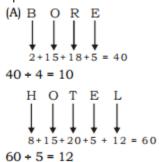
## Question (103)

BORE: 10:: HOTEL:?

(A) 12 (B) 15 (C) 25 (D) 30

Correct Option : A

Explanation:



# Question (104)

6:12::20:?

(A) 50 (B) 30

(C) 42 (D) 38

Correct Option: B

Explanation:

 $2 \times 3 = 6$ 

 $3 \times 4 = 12$ 

 $4 \times 5 = 20$ 

 $5 \times 6 = 30$ 

## Question (105)

Directions (5 – 7): Find the odd word/letters/number pair/number from the given alternatives.

# निर्देश (5-7): दिये गए विकल्पों में से विषम शब्द/अक्षर/संख्या युग्म/संख्या को चुनिए|

- (A) Parrot/तोता (B) Bat/चमगादड़
- (C) Crow/कौवा (D) Sparrow/गौरेया

Correct Option : B Explanation :

Here, all except Bat, belong to hte class of

(birds), while bat is mammal.

## Question (106)

- (A) 6895 (B) 6958
- (C) 7948 (D) 9783

Correct Option : D Explanation :

In all other numbers the sum of the digits

is 28.

## Question (107)

(A) BCDE (B) PQRS

(C) WXYZ (D) STUW

Correct Option : D

Explanation:

Each other group contains 4 consecutive

letters.

## Question (108)

Directions (8-9): In the following questions, a series is given with one terms missing. Choose

the correct alternative from the given ones that will complete the series:

निर्देश (8-9): निम्नलिखित प्रश्नों में, एक अन्क्रम दिया गया है जिसमें एक पद ल्प्त है। दिए गए विकल्पों में से वह सही विकल्प चुनिए जो अनुक्रम को पूरा करें।

118, 182, 186, 222, \_\_\_\_

- (A) 318 (B) 266
- (C) 258 (D) 226

Correct Option: D

Explanation:

 $118 + (unit digit)^2 = 118 + 8^2 = 118 + 64 =$ 

182

182 + 4 = 186

186 + 36 = 222

222 + 4 = 226

# Question (109)

$$7\frac{1}{7}$$
,  $8\frac{2}{6}$ ,  $9\frac{5}{5}$ ,  $12\frac{4}{4}$ ,  $16\frac{2}{3}$ , \_\_\_\_

(A) 
$$35\frac{3}{4}$$
 (B)  $16\frac{4}{4}$ 

(B) 
$$16\frac{4}{4}$$

(C) 
$$\frac{50}{2}$$

(C) 
$$\frac{50}{2}$$
 (D)  $15\frac{2}{4}$ 

Correct Option: C

Explanation:

(C) 
$$7\frac{1}{7} = \frac{50}{7}$$
,  $8\frac{2}{6} = \frac{50}{6}$ ,  $9\frac{5}{5} = \frac{50}{5}$ 

$$12\frac{2}{4} = \frac{50}{4}, \ 16\frac{2}{3} = \frac{50}{3}$$

The denominator is decreasing by 1, but the

numerator remains constant therefore  $\frac{50}{2}$ .

Directions: In question no. 10, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

निर्देश: प्रश्न न. 10 में, अक्षरों का कौन-सा समूह खाली स्थानों पर क्रमवार रखने से दी गई अक्षर श्रुंखला को पूरा करेगा?

ZX \_ TR \_ NLJ \_ FD \_

- (A) VPHB (B) VRHB
- (C) UPJB (D) UPJD

Correct Option: A

Explanation:

$$Z \xrightarrow{-2} X \xrightarrow{-2} V$$

$$T \xrightarrow{-2} R \xrightarrow{-2} \mathbf{P}$$

$$N \xrightarrow{-2} L \xrightarrow{-2} J \xrightarrow{-2} H$$

$$F \xrightarrow{-2} D \xrightarrow{-2} \mathbf{B}$$

## Question (111)

Direction (11-12): In question no 11 to 12, select the missing number from the give responses.

निर्देश (11-12) : प्रश्न संख्या 11 से 12 में, दिए गए विकल्पों में से विलग्त संख्या चनिए।

5	9	15
16	29	?
49	89	147

- (A) 45
- (B) 48
- (C) 51
- (D) 54

Correct Option : B

Explanation:

(B) 
$$5 \times 3 + 1 = 16$$

$$16 \times 3 + 1 = 49$$

$$9 \times 3 + 2 = 29$$

$$29 \times 3 + 2 = 89$$

# Question (112)

	8			12			14	
6	54	7	8	51	4	9	?	5
	4			7			9	Г
		8				_		

(A) 53 (C) 71 (B) 68 (D) 76

Correct Option : B

Explanation:

 $(6 \times 7) + (8 + 4) = 42 + 12 = 54$ 

 $(8 \times 4) + (12 + 7) = 32 + 19 = 51$ 

 $(9 \times 5) + (14 + 9) = 45 + 23 = 68$ 

## Question (113)

From the given alternative words, select the words which can't be formed by using the letters of the given word.

दिए गए वैकल्पिक शब्दों में से, उस शब्द का चयन करें, जो दिए गए शब्द के अक्षरों का प्रयोग कर नहीं बनाए जा सकते हैं।

**PERMANENT** 

- (A) REMNANT
- (B) TRAMP
- (C) MENTOR
- (D) AMPERE

Correct Option : C

Explanation:

There is no 'O' letter in the keyword.

## Question (114)

If + means +, - means +, × means - and

+ means ×, then 
$$\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1} = ?$$

यदि + का मतलब +, - का मतलब +, × का मतलब - और

+ का मतलब 
$$\times$$
 है, तो  $\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1} = ?$ 

- (A) O
- (B) 8
- (C) 12
- (D) 16

Correct Option : A

Explanation:

Using correct symbols, we have:

given expression = 
$$\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1}$$

$$=\frac{32 \div 8 - 4}{32 - 32 + 1} = \frac{4 - 4}{0 + 1} = 0$$

## Question (115)

In certain code language if LIBERATE is written as 56423172, then how TRIBAL will be written in the same code?

यदि किसी सांकेतिक भाषा में LIBERATE को 56423172 लिखा जाता है, तो उसी सांकेतिक भाषा में TRIBAL को किस प्रकार लिखा जाएगा?

- (A) 736415 (B) 673451
- (C) 476315 (D) 743615

Correct Option: A

### Question (116)

Two position of a die has been shown here. Which digit will be at top when 3 is at bottom. यहाँ पासे की दो अवस्थाओं को दिखाया गया है। जब अंक 3 नीचे हैं, तो ऊपर कौन-सा अंक आएगा?





(A) 4 (C) 2 (B) 5 (D) 1

Correct Option: D

# Question (117)

Arrange the words given below in a meaningful sequence.

निम्न शब्दों के एक सार्थक क्रम में व्यवस्थि करें।

- 1. Accident/दुर्घटना 2. Judge/न्यायधीश
- 3. Doctor/चिकित्सक 4. Lawyer/वकील
- 5. Police/पुलिस
- (A) 1, 3, 4, 2, 5 (B) 1, 3, 5, 4, 2
- (C) 1, 2, 3, 4, 5 (D) 1, 2, 5, 4, 3

Correct Option : B

Explanation:

 $1 \rightarrow 3 \rightarrow 5 \rightarrow 4 \rightarrow 2$ 

# Question (118)

Which of the following diagrams indicates the best relation between teacher, scholar and student?

निम्न में से कौन-सी आकृति शिक्षक, विद्वान तथा विद्यार्थी के बीच संबंध बताती है?









# Correct Option: A

#### Explanation:

(A) Some students may be scholars and viceversa.

Some students may be teachers and vice-

Some students who are scholars may be teachers.



## Question (119)

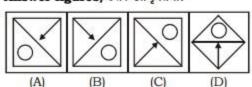
Choose the correct mirror image of the given question figure from amongst the four alternative, if YX is a mirror.

दिए गए चार विकल्पों में से प्रश्न आकृति का सही दर्पण प्रतिबिम्ब का चयन करें यदि YX दर्पण है।

## Question figure/प्रश्न आकृतिः



## Answer figures/उत्तर आकृतियाँ:



Correct Option: C

## Question (120)

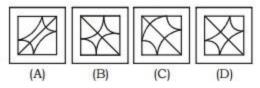
Identify the figure that will complete the pattern.

. उस आकृति को पहचाने जो पैटर्न को पूरा करेगी।

# Question figure/प्रश्न आकृति :



### Answer figures/उत्तर आकृतियाँ :



Correct Option: B

## Question (121)

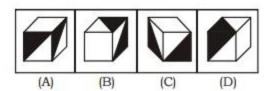
Choose from the four answer figures the figure that will be formed when the question figure is folded into a box.

दिए गए चार उत्तर आकृतियों में से उस आकृति का चयन करें जब प्रश्न आकृति को एक बॉक्स के रूप में मोड़ा जाएगा।

## Question figures/प्रश्न आकृतियाँ :



## Answer figures/उत्तर आकृतियाँ :



Correct Option: C

# Question (122)

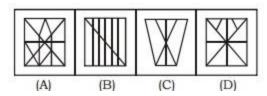
Select the alternative in which the question figure can be found.

उस आकृति का चयन करें जिसमें प्रश्न आकृति निहित है।

## Question figure/प्रश्न आकृतिः



#### Answer figures/उत्तर आकृतियाँ:



Correct Option: C

## Question (123)

At what time between 6 and 7'o clock the hands of a clock concide?
6 और 7 बजे के बीच किस समय घड़ी की सुईयाँ आपस में मिलती है?

- (A)  $32\frac{8}{11}$  min past 6/6 बजकर  $32\frac{8}{11}$  मिनट
- (B)  $34\frac{8}{11}$  min past 6/6 बजकर  $34\frac{8}{11}$  मिनट
- (C)  $30\frac{8}{11}$  min past 6/6 बजकर  $30\frac{8}{11}$  मिनट
- (D)  $32\frac{5}{7}$  min past 6/6 बजकर  $32\frac{5}{7}$  मिनट

Correct Option : A

Explanation:

$$T = 6 + \left[ \frac{2}{11} (6 \times 30 + 0) \right]$$
$$= 6 + \left[ \frac{360}{11} \right]$$
$$= 6 \text{ past } 32 \frac{8}{11} \text{ min}$$

#### Question (124)

Directions (24): Two statement is given followed by two conclusions I and II. You have to consider the statement to be true, even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

निर्देश (24): दो कथन दिये गये हैं जिनके आगे दो निष्कर्ष । तथा ॥. आपकों कथनों को सत्य मानकर विचार करना है, चाहे वह सामान्यत: ज्ञात तथ्यों से भिन्न प्रतीत होते हों। आपको निर्णय करना है कि दिए गए निष्कर्षों में से कौंल-सा निश्चित रूप से दिए गए कथनों द्वारा सही निकलता है, यदि कोई हो।

#### Statement/कथन:

All carts are cars./सभी गाड़ी, कार हैं।

All cars are trains./सभी कारें, रेलगाड़ी हैं।

#### Conclusions/निष्कर्ष:

- I. All carts are trains./सभी गाड़ी, रेलगाड़ी हैं|
- II. All trains are carts./सभी रेलगाड़ी, गाड़ी है।
- (A) Only conclusion I follows.

केवल निष्कर्ष । अनुसरण करता है|

(B) Only conclusion II follows.

केवल ॥ अन्सरण करता है|

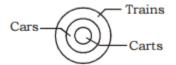
(C) Both conclusion I and II follow.

दोनों निष्कर्ष । ओर ॥ अन्सरण करते हैं|

(D) Neither conclusion I nor II follows.

न तो निष्कर्ष । ओर ना ही ॥ अनुसरण करता है|

Correct Option : A Explanation :



Question (125)

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of letters as in two matrices given below. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column. E.g., 'M' can be represented by 42, 31 etc., 'P' can be represented by 95, 88 Similarly, you have to identify the set of numbers for the word 'ROST'.

एक शब्द केवल एक संख्या-समूह द्वारा दर्शाया गया है, जैसा कि विकल्पों में से किसी एक में दिया गया है। विकल्पों में दिए गए संख्या-समूह अक्षरों के दो वर्गों द्वारा दर्शाए गए हैं, जैसा कि नीचे दिए गए दो आव्यूह में है। आव्यूह-I के स्तंभ और पॉक्त की संख्या 0 से 4 दी गई है और आव्यूह-II की 5 से 9। इन आव्यूहों से एक अक्षर को पहले उसकी पॉक्त और बाद में स्तंभ संख्या द्वारा दर्शाया जा सकता है। उदाहरण के लिए 'M' को 42, 31 द्वारा दर्शाया जा सकता है, 'P' को 95, 88 द्वारा दर्शाया जा सकता है। इसी तरह से, आपको शब्द 'ROST' के लिए संख्या समूह को पहचानना है।

Matrix-I/आव्यृह-II Matrix-II/आव्यृह-II

	0	1	2	3	4		5	6	7	8	9
4	K	L	M	N	0	9	P	Q	R	S	T
3	L	M	K	0	N	8	T	S	Q	Р	R
2	N	0	L	M	K	7	R	Т	S	Q	P
1	M	N	0	K	L	6	S	P	T	R	Q
0	0	L	N	L	M	5	Q	R	P	T	S

- (A) 56, 44, 67, 40
- (B) 97, 21, 66, 29
- (C) 75, 00, 10, 92
- (D) 68, 33, 65, 58

Correct Option: D

### Question (126)

Which amongst the following states/UT has not identified tribal community?

निम्न में से वह राज्य/संध राज्य क्षेत्र कौन सा है , जिसे कोई अभिजात जन- जातीय सम्दाय नहीं है ?

- (A) Chhattisgarh/छत्तीसगढ़
- (B) Haryana/हरियाणा
- (C) Maharashtra/महाराष्ट्र
- (D) Karnataka/कर्नाटक

Correct Option: B

## Question (127)

Among the following, which one is not an ape?

निम्नलिखित में से एक बंदर नहीं है ?

- (A) Gibbon/गिब्बन (B) Gorilla/गोरिल्ला
- (C) Langur/लंगूर (D) Orangutan/आरंगुटान

Correct Option : C

Explanation:

Gibbon, Gorilla and Orangutan are apes, but Langur is not an ape, it is prosimians.

## Question (128)

Vulcanization of rubber is carried out by adding:

रबर की वाल्केनाइजेशन के लिए, उसमें मिलाया जाता है-

- (A) Sulphur/सल्फर
- (B) Carbon/कार्बन
- (C) Ozone/ओजोन
- (D) Phosphorus/फास्फोरस

#### Question (129)

Which one of the following is an insectivorous plant?

निम्नलिखित में से कौन एक कीटभक्षी पौधा है ?

- (A) Passion flower plant/जुनून फूल के पौधे
- (B) Pitcher plant/पिचर प्लांट
- (C) Night queen/रात रानी
- (D) Flame of the forest/जंगल की ज्वाला

Correct Option: B

Explanation:

Pitcher plant is an insectivorous plant. It feeds on living creatures including insects and small mammals. These plants attract the prey with a smell of rotting meat. The victim is dissolved by some enzymes.

### Question (130)

Where is the headquarters of the Confederation of Indian Industry (CII)?

भारतीय उद्दोग परिसंध ( सीआईआई ) का मुख्यालय कहाँ पर है ?

- (A) Pune/प्णे (B) New Delhi/नई दिल्ली
- (C) Bhopal/भोपाल (D) Raipur/रायपुर

Correct Option : B

Explanation:

The Confederation of Indian Industry (CII) is an association of Indian businesses which works to create an environment conducive

to the growth of industry in India. The headquarters of CII is located at New Delhi. It is in news because CII has launched a unique platform "Startup Mentorship Circle" in Mumbai to help in connecting start-ups with the global marketplace. The platform is truly a strong eco-system for nurturing innovation and startup to drive sustainable economic growth and generate large scale employment opportunities.

### Question (131)

What is the theme of the first-ever World Tsunami Awareness Day (WTAD)? पहली वर विश्व स्नामी जाकरुकता दिवस (WTAD) का बिषय(थीम) क्या है ?

- (A) Reduce Mortality, Raise awareness/ रिड्यूस मोर्टेलिटी ,रेज अवेयरनेस
- (B) Knowledge for Life/नॉलेज फॉर लाइफ
- (C) Live To Tell: Raising Awareness/लाइव टू टेल: रेजिंग अवेयरनेस
- (D) Effective Education and Evacuation Drills/इफेक्टिव एज्केशन एंड ड्रिल्स

Correct Option: D

Explanation:

The first-ever World Tsunami Awareness Day (WTAD) has been observed on November 5, 2016 to spread awareness among people across the world in matters related to the dangers of tsunami and shall stress on the importance of early warning systems in order to mitigate damage from the often devastating natural hazard. It also aims at reviving traditional knowledge about tsunamis. The 2016 theme of WTAD is "Effective Education and Evacuation Drills".

#### Question (132)

The Assam state derives its name from that of a tribe that conquered the region. Where did the

tribesmen come from?

असम राज्य का नाम उस जनजाति पर रखा गया था उस क्षेत्र को जीता था |वह कबीला कहा से आया था?

- (A) Tibet/तिब्बत
- (B) Mongolia/मंगोलिया
- (C) Burma (now Myanmar)/बर्मा( अब म्यांमार)
- (D) Siam (now Thailand)/स्याम( अब थाईलैंड

Correct Option: A

Question (133)

The book "An Era of Darkness: The British Empire in India" has been authored by whom? प्रतक ' एन एरा ऑफ़ डार्कनेश: द ब्रिटिश एम्पायर इन इंडिया' किसके द्आर लिखी गई है ?

- (A) Amrish Tripathi/अमरीश त्रिपाठी
- (B) Hamid Ansari/हामिद अंसारी
- (C) Shashi Tharoor/शशि थरूर
- (D) Romesh Dutt/रोमेश दत्त

Correct Option : C

Explanation:

The book "An Era of Darkness: The British Empire in India" has been authored by Dr. Shashi Tharoor, the Lok Sabha MP. The book recalls in some detail misdeeds of the British in looting India and making it suffer an agonizing and violent death. In it, author has rightly points out that British rule in India was effectively and regularly supplemented by famine, forced migration and brutality the three examples of why British rule over India was despotic and anything but enlightened. The book has recently released by the Vice President of India M. Hamid Ansari.

### Question (134)

From the third century AD when the Hun invasion ended the Roman Empire, the Indian merchants relied more and more on the:

तीसरी शताब्दी ईस्वी में हूणों के आक्रमण से रोमन के साम्राज्य की समाप्ति के पश्चात् पर भारतीय व्यापार अधिक से अधिक निर्भर रहते थे-

- (A) African trade/अफ़्रीकी व्यापार पर
- (B) West-European trade/पश्चिमी-यूरोपीय व्यापार पर
- (C) South-East Asian trade/दक्षिण-पूर्व एशियाई व्यापार पर
- (D) Middle-Eastern trade/मध्य-पूर्वी व्यापार पर

Correct Option : C
Explanation :
After the 3rd century AD Roman Empire came to an end. Indian merchants meanwhile had begun to rely more heavily on the south-east Asian Trade.

#### Question (135)

Which state government has recently inked MoU with Union Ministry of Civil Aviation for Regional Connectivity Scheme (RCS)- UDAN?

किस राज्य सर्कार ने हाली में क्षत्रिय संपर्क योजना (आरसीएस)-UDAN के लिया नागरिक उड्डयन मंत्रालय के साथ समझौता क्र ज्ञापन पर हस्ताक्षर किए है ?

- A) Assam/असम
- (B) Odisha/उड़ीसा
- (C) Haryana/हरियाणा
- (D) Madhya Pradesh/माध्य प्रदेश

Correct Option: A

Explanation:

The Assam government has recently signed a Memorandum of Understanding (MoU) with the Union Ministry of Civil Aviation (MoCA) under Regional Connectivity Scheme (RCS) - UDAN to boost State air connectivity. The Airports Authority of India (AAI) shall be the Implementing Agency for the scheme on behalf of Ministry of Civil Aviation. As per the MoU, the State Government shall reduce VAT to 1% or less on ATF at RCS Airports and for RCS flights from other airports located within the state. The Government of Assam shall also provide minimum land for development and expansion of RCS Airports and also provide multi-modal hinterland connectivity (road, rail, metro, waterways, etc.) as required.

### Question (136)

Who among the following streamlined the Maratha administration after Sambhaji?

निम्न में से कौन संभाजी के बाद मराठा प्रशासन को सुव्यवसिथत किए थे ?

- (A) Raja Ram/राजाराम
- (B) Balaji Vishwanath/बालाजी विश्वानाथ
- (C) Ganga Bai/गंगाबाई
- (D) Nanaji Deshmukh/नानाजी देशम्ख

Correct Option: B

Explanation:

Balaji Vishwanath. As Sambhaji (1680-89) were succeeded by Rajaram, Shivaji II, Tarabai and Shahu ji. Balaji Vishwanath played a crucial role in the final victory of Shahu by winning over almost all the Maratha sardars to the side of Shahu. Under Baji Rao I Maratha power reached a zenith. But that option is not given.

#### Question (137)

"Petrotech-2016" the International Oil and Gas Conference and Exhibition will be held in which city? अंतर्राष्ट्रीय तेल एवं गैस सम्मेलन और प्रदर्शनी "पेट्रोटेक 2016" किस शहर में आयोजित किया जाएगा?

- (A) New Delhi/नई दिल्ली
- (B) Tokyo/टोकियो
- (C) Tehran/तेहरान
- (D) Kabul/काब्ल

Correct Option : A

Explanation:

The 12th edition of International Oil and Gas Conference and Exhibition "Petrotech-2016" will be held at Pragati Maidan in New Delhi on December 5th. The 2016 theme is "Hydrocarbons to fuel the future - Choices and Challenges". The purpose of the global event is to bring Energy Ministers, industry leaders, professionals, academicians and domain experts from the energy sector on a common platform. It is a biennial platform for national and international experts in the oil & gas industry to exchange views and share knowledge, expertise and experiences.

Question (138)

Match List I with II and select the correct answer using the codes given below the lists.

सूची-I को सूची-II से सुमेलित कर नीचे दिए गए सूचियों के प्रवृष्टियों में मौजूदा कूटों का उपयोग कर सही उत्तर का चयन करें।

Lis	st-I/सूची-I		List-II/सूची-II
(Pe	eriod)/( अवधि )		(Event)/( घटना )
a.	1883	1.	
b.	1906	2.	Formation of the All India State Peoples Conference अखिल भारतीय स्टेट पीपुल्स कांन्फ्रेस का गठन
c.	1927	3.	Foundation of Muslim League at Dacca/दाका में मुस्लिम लीग का गठन
d.	1932	4.	First session of National Conference at Calcutta/कलकता में नेशनल कान्फ्रेंस का पहला सत्र

#### Codes/क्टः

	a	b	C	d
(A)	4	3	1	2
(B)	3	4	1	2
(C)	4	3	2	1
(D)	3	4	2	1

Correct Option : C

Explanation:

Nawab Salimullah founded Muslim League in 1906 at Dacca. Communal Award was announced by Ramsay McDonald in 1932.

#### Question (139)

The "Red Data Books" published by the International Union for Conservation of Nature and Natural resources (IUCN) contains lists of?

अंतर्राष्ट्रीय प्रकृति संरक्षण संध और प्राकृतिक संसाधनों द्वारा प्रकाशित "रेड डाटा प्स्तकें"में सूचिया समाविष्ट है ?

- 1. Endemic plant and animal species present in the biodiversity hotspots./ जैव विविधता में मौजूदा स्तानीय पौधे और पशु प्रजातियों के आकर्षण केंद्र के लिए
- 2. Threatened plant and animal species./विल्प्त होने की कगार पर पौधे और पश् प्रजातियाँ
- 3. Protected sites for conservation of nature and natural resources in various countries./विभिन्न देशों में प्रकृति और प्राकृतिक संसाधनों के संरक्षण के लिए सुरक्षित स्थान।

Select the correct answer using the codes given below.

निचे दिए गए कूट का प्रयोग करके सही उत्तर का चयन करे |

- (A) 1 and 3/1 और 3
- (B) 2 only/केवल 2
- (C) 2 and 3/2 और 3
- (D) 3 only/केवल 3

Correct Option : B

Explanation:

The red data book contains only 8 lists of threatened plant and animal species

#### Question (140)

Plimsoll line is a reference line in a:

पिल्मसोल लाइन के संदर्भ में है –

- (A) Plane/विमान
- (B) Train/रेलगाड़ी
- (C) Ship/जहाज
- (D) Submarine/पनड्ब्बी

#### Question (141)

Pandit Amaradeva, who died recently, was the music legend of which country? पंडित अमरदेव ,जिनका हाल ही में निधन हो गया है,वह किस देश में प्रसिद्ध संगीतकार थे ?

- (A) India/इंडिया
- (B) Nepal/नेपाल
- (C) Sri Lanka/श्रीलंका
- (D) Bhutaन/भूटान

Correct Option : C

Explanation:

Pandit Amaradeva (88), the legendary Sri Lankan singer and composer, has recently passed away in Sri Jayawardenepura Kotte, Sri Lanka. He was the recipient of many international honours, including Ramon Magsaysay Award, Padma Shri, for his contribution to music.

#### Question (142)

The amount of chlorine available in water after disinfection is called as:

विसंक्रमण के बाद जल में उपलब्ध क्लोरिन की मात्रा को कहते है ?

- (A) Free chlorine/मुक्त क्लोरिन
- (B) Residual chlorine/अवशिष्ट क्लोरिन
- (C) Free available chlorine/मुक्त उपलब्ध क्लोरिन
- (D) Combined available chlorine/संयुक्त उप्लाब्द्थ क्लोरिन

#### Question (143)

Generally, the soil of the northern plains of India has been formed by सामान्यत:भारत का उत्तरी मैदान किस मिटटी दवारा निर्मित है ?

- (A) degradation/अपकर्ष
- (B) aggradation/भूमिवृद्धि
- (C) weathering in situ/अपक्षय
- (D) erosion/ अपक्षरण

Correct Option : B

Explanation:

The Northern Fertile Plain which is also called the Gangetic Plain lies to the south of Himalayan Region. The soil of this plain is built of the sediments and brought down by the rivers from Himalayas. Such plain is called an alluvial plain and it is very fertile. This plain is one of the largest and most fertile plains of the World. Aggradation is the term used in geology for the increase in land elevation due to the deposition of sediment which includes lowland alluvial rivers, river deltas and alluvial fans.

#### Question (144)

What provision in the constitution enabled the Central Government to impose the service tax and to expand its span?

संबिधान के किस प्रावधान ने केंद्र सर्कार को सेवा क्र लगाने और उसकी अवधि बढानेका अधिकार दिया ?

(A) List 1, Schedule 7/सूचि 1, अन्सूची 7

- (B) List 3, Schedule 7/ सूचि 3, अन्सूची 7
- (C) Residuary Powers under Article 248/ अन्च्छेद248 के अंतर्गत अवशिष्ट शिकत्याँ
- (D) Emergency Powers/आपातकालीन शकित्याँ

Correct Option: C

#### Question (145)

A man cannot see clearly beyond 10 meters. The disease he suffers from is: एक आदमी को 10 मीटर की दुरी से आगे स्पष्ट रूप से नहीं देख सकते है |वह रोग से ग्रस्त है –

- (A) Far sight/दूरदृष्टि दोष
- (B) Myopia/निकटहिष्ट दोष
- (C) Cataract/मोतियाबिन्द
- (D) Hypermetropia/दीर्घहष्टि दोष

Correct Option : B

Explanation:

The man who is suffering from myopia has a vision condition where he can see close objects very clearly, but objects farther away appear blurred. Nearsightedness occurs if the eyeball is too long.

#### Question (146)

In a business, raw materials, components, work in progress and finished goods are jointly regarded as

एक व्यवसाय में, कच्चा लाल ,अवयव, कार्य में प्रग्रती और तैयार मॉल संयुक्त रूप से कहा जाता है –

- (A) capital stock/पूंजीगत स्टाक
- (B) inventory/वास्त् सूचि

- (C) investment/निवेश
- (D) net worth/कुल मूल्य

Correct Option : B

Explanation:

Inventory refers to raw materials, workinprocess goods and completely finished goods that are considered to be the portion of a business's assets that are ready or will be ready for sale. Inventory are also represented as one of the most important assets that most businesses possess because the turnover of inventories represents one of the primary sources of revenue generation and subsequent earnings for the company's shareholders/owners.

#### Question (147)

**Devaluation means** 

अवमूल्यन का अर्थ है

- (A) Depreciation of the fixed assets/सिथर परिसम्पत्ति का
- (B) Increase in the currency value in terms of foreign currency/विदेशी मुद्रा के मामले में मुद्रा मूल्य में वृद्धि
- (C) Reduction in the external value of currency/मुद्रा के बह मूल्य में कमी
- (D) Fall in valuation of the essentials in an economy/अर्थव्यवस्था में आवशक वस्तुओं के मूल्यांकन में गिरावट

Correct Option : C

Explanation:

Devaluation in modern monetary policy is a reduction in the value of a currency with respect to those goods, services or other monetary units with which that currency can be exchanged. It means official lowering of the value of a country's currency within a fixed exchange rate system.

#### Question (148)

Sometimes computers and cache registers in a foodmart are connected to a UPS system. What does UPS mean?

कभी कभी एक फ़ुडमार्टमें कंप्यूटर और काश रजिस्टर यु.पि.एस .प्रणाली से जुड़े होते है | यु.पि.एससे क्या तात्पर्य है ?

- (A) United Parcel Service/यूनाइटेड पार्सल सर्वीस
- (B) Uniform Product Support/यूनिफार्म प्रोडक्ट सपोर्ट
- (C) Under Paneling Storage/अडर पनेलिंग स्टोरेज
- (D) Uninterruptable Power Supply/अनिन्तेरेपताबेल पवार सप्लाई

Correct Option : D

Explanation:

An uninterruptable power supply (UPS) is a backup power supply, such as a battery that provides emergency power in the event when power is lost from the main supply

#### Question (149)

Which among the following metals provides amphoteric oxide?

निम्न में से कौन सी धात् उभय धर्मी ऑक्साइड प्रदान करती है ?

- (A) Sodium/सोडियम
- (B) Silver/चांदी
- (C) Aluminium/एल्य्मिनियम
- (D) Calcium/कैल्सियम

Correct Option: C

Explanation:

An amphoteric oxide is a molecule or ion that can react as an acid as well as a base. Many metals such as zinc, tin, lead, aluminium, beryllium and most metalloids form amphoteric oxides or hydroxides.

#### Question (150)

Match List-I with List-II and select the correct answer using the code given below the Lists

सूची-I और सूची-II को सुमेलित करे और नीचे दी गई सूची में कोड का प्रयोग करके सही उत्तर का चुनाव करे।

	List-I/सूची-I		List-II/सूची-II
(a)	Member of	1.	Elected by an
	Parliament/		Electoral College/
	संसद का सदस्य		निर्वाचन मंडल द्वारा निर्वाचित
(b)	President/	2.	Elected by the
	राष्ट्रपति		Parliament/संसद
			द्वारा निर्वाचित
(c)	Vice-President/	3.	Elected by the Lok
	उप-राष्ट्रपति		Sabha/लोकसभा द्वारा
			निर्वाचित
(d)	Speaker/अध्यक्ष	4.	Elected by adult
			voting/वयस्क मतदान
			द्वारा निर्वाचित
(1 <u>12</u> 15)			

#### Code:/कोड

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	2	3	4	1
(C)	3	4	1	2
(D)	4	1	2	3

Correct Option : D Explanation :

(D)

Member of Parliaments are directly• elected by citizens of India on the basis of Universal Adult franchise, except two who are appointed by the President of India.

The President of India is elected, from ane Electoral College comprising a group of nominees, by the elected members of the Parliament of India (Lok Sabha and Rajya Sabha) as well as of the state legislatures (Vidhan Sabhas).

The Vice President is elected indirectly• by an electoral college consisting members of both houses of the Parliament.

Members of the Lok Sabha elect their• Speaker in the first meeting of the House after a general election.

#### Question (151)

When 75% of a number is added to 75, the result is the same number. Find the number.

किसी संख्या के 75% में जब 75 जोड़ा जाता है, परिणाम वही संख्या आती है, तो संख्या जात करें।

- (A) 225 (B) 270
- (C) 300 (D) 325

Correct Option: C

Explanation:

(C) 
$$75\% = \frac{3}{4}$$

Let the number = 4xAccording to the question

$$\Rightarrow 4x \times \frac{3}{4} + 75 = 4x$$

$$\Rightarrow$$
 3x + 75 = 4x

x = 75

 $\therefore$  Required number = 4x=  $4 \times 75 = 300$ 

## Question (152)

A person on selling an article for RsRs.96 finds that his loss percent is one-fourth of the amount of rupees that he paid for the article. What can be cost price?

एक दुकानदार द्वारा वस्तु को रु96 में बेचने पर यह पाया गया कि उसका हानि प्रतिशत क्रय मूल्य के एक-चौथाई के बराबर है, तो वस्तु का क्रय मूल्य ज्ञात कीजिए।

- (A) Rs.160
- (B) Rs.240
- (C) Rs.160 or/या Rs. 240
- (D) Rs.480

Correct Option: C

#### Explanation:

(C) S.P = ₹ 96  
let CP = ₹ 
$$x$$
  

$$\therefore Loss\% = \frac{1}{4}x = \frac{x}{4}$$
i.e.,  $\frac{x}{4} = \frac{x-96}{x} \times 100$ 

$$x^2 = (4x-384) \times 100$$

$$\Rightarrow x^2 - 400x + 38400 = 0$$

$$\Rightarrow x^2 - 240x - 160x + 38400 = 0$$

$$(x-240) (x-160)$$

$$x = 240 \text{ or } 160$$

#### Question (153)

A sum of money becomes 41/40 of itself in 1/4 year at a certain rate of simple interest. The rate of interest per annum is:

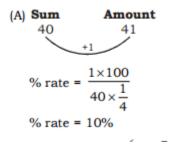
कोई धनराशी साधारण ब्याज की किसी दर से 1/4 वर्ष में स्वयं का 41/40 ग्णा हो जाती है। वार्षिक ब्याज दर है-

(A) 10% (B) 1%

(C) 2.5% (D) 5%

Correct Option: A

Explanation:



#### Question (154)

An amount of Rs.8000 lent at 5% per annum compound interest for 2 years will become:

रु8000 की उधार दी गई राशि 5% वार्षिक चक्रवृद्धि ब्याज की दर से 2 वर्षों में कितनी हो जाएगी?

(A) Rs.8815 (B) Rs.9000

#### (C) Rs.9800 (D) Rs.8820

Correct Option : D

Explanation:

(D) Amount = 
$$8000 \left(1 + \frac{5}{100}\right)^2$$

$$= 8000 \times \frac{21}{20} \times \frac{21}{20}$$

= ₹8820

#### Question (155)

Two vessels A and B contain milk and water mixed in the ratio 4:3 and 2:3. The ratio in which these mixtures be mixed to form a new mixture containing half milk and half water is:

दो बर्तनों A और B में दूध और पानी का अनुपात क्रमश: 4:3 और 2:3 है| इन बर्तनों के मिश्रण को किस अनुपात में मिलाया जाए की नए मिश्रण में आधा दूध व आधा पानी हो?

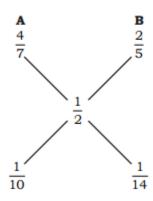
(A) 7:5 (B) 6:5

(C) 5:6(D) 4:3

Correct Option: A

Explanation:

A) Milk : Water A 4 : 3 B 2 : 3 New mixture 1 : 1



ratio = 7:5

## Question (156)

If two-third of A is four-fifth of B, then A : B = ?

यदि A का 2/3वां हिस्सा B के 4/5 वें हिस्से के बराबर हो, तो A: B ज्ञात करें|

(A) 5:6 (B) 6:5

(C) 10:9(D)9:10

Correct Option: B

Explanation:

(B) 
$$\frac{2}{3}$$
A =  $\frac{4}{5}$ B

A : B 12 : 10 6 : 5

## Question (157)

A can do a piece of work in 25 days and B can do the same work in 30 days. They work together for 5 days, how much work is left?

A किसी कार्य को 25 दिनों में तथा B उसी कार्य को 30 दिनों में कर सकता है| दोनों 5 दिनों तक साथ कार्य करते हैं, तो अब कितना कार्य शेष रह गया है?

(A)15/30 (B) 11/30

(C)12/30 (D)19/30

Correct Option : D

Explanation:

.. A does 6 units in 1 day B does 5 units in 1 day

Total work of (A + B) in 1 day = 11 units

$$\therefore$$
 5 days = 11 × 5 = 55 units  
work left = 150 - 55 = 95 units

Remaining work = 
$$\frac{95}{150}$$
 =  $\frac{19}{30}$ 

#### Question (158)

A cylindrical cistern of diameter 50 cm is full of water. If 22 litres of water is drawn off, the water level in the cistern will drop

by (Use 
$$\pi = \frac{22}{7}$$
)

50 सेमी. व्यास वाली बेलनाकार टंकी पानी से भरी हुई है। यदि 22 लीटर पानी निकाल लिया जाए तब टंकी में पानी का स्तर कितना कम होगा?

(A) 
$$11\frac{1}{5}$$
 cm/सेमी. (B)  $12\frac{6}{7}$  cm/सेमी.

(C) 
$$10\frac{1}{2}$$
 cm/सेमी. (D)  $20\frac{2}{5}$  cm/सेमी.

Correct Option : A

Explanation:

(A) Volume of cistern = 
$$\pi r^2 h$$
  
 $\pi r^2 h = 22,000 \text{ cm}^3$ 

$$\frac{22}{7} \times \frac{50}{2} \times \frac{50}{2} \times h = 22,000$$

$$h = \frac{22000 \times 7 \times 2 \times 2}{22 \times 50 \times 50}$$

$$h = \frac{56}{5} \text{ cm}$$

$$h = 11\frac{1}{5}$$
 cm

#### Question (159)

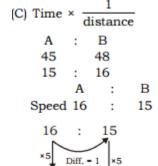
A train covers a distance between station A and station B in 45 minutes. If the speed of the train is reduced by 5 km/hr, then the same distance is covered in 48 minutes. The ditance between station A and B is:

एक रेलगाड़ी A तथा B sssssssstssstassstsssssssस्टेशनों के बीच की दूरी 45 मिनट में तय करती है। यद उस रेलगाड़ी की गति में 5 किमी/घण्टा की कमी कर दी जाए तो वह दूरी 48 मिनटों में तय होती है। तदनुसार, A तथा B स्टेशनों के बीच की दूरी कितनी है?

- (A) 60 km/किमी.
- (B) 64 km/किमी.
- (C) 80 km/किमी.
- (D) 55 km/किमी.

Correct Option : C

Explanation:



#### Question (160)

The average of three numbers is 154. The first number is twice the second and the second number is twice the third. The first number is:

3 संख्याओं का औसत 154 है। पहली संख्या दूसरी से द्ग्नी है और दूसरी संख्या तीसरी से द्ग्नी है। पहली संख्या है-

- (A) 264 (B) 132
- (C) 88 (D) 66

Correct Option: A

Explanation:

- (A) Let third number = x
- $\therefore$  second number = 2x

and first number = 4x

$$\therefore 4x + 2x + x = 154 \times 3$$

$$\Rightarrow$$
 7x = 462

$$x = \frac{462}{7} = 66$$

 $\therefore$  First number =  $4x = 4 \times 66 = 264$ 

## Question (161)

$$2\sqrt[3]{32} - 3\sqrt[3]{4} + \sqrt[3]{500} = ?$$

- (A) 43√6
- (B) 3√24
- (C) 6<sup>3</sup>√4
- (D) 916

Correct Option : C

Explanation:

(C) 
$$2\sqrt[3]{2^3 \times 4} - 3\sqrt[3]{4} + \sqrt[3]{5^3 \times 4}$$

$$= 2 \times 2\sqrt[3]{4} - 3\sqrt[3]{4} + 5\sqrt[3]{4}$$

$$= 9\sqrt[3]{4} - 3\sqrt[3]{4}$$

Question (162)

If  $\frac{x}{a} = \frac{1}{a} - \frac{1}{x}$ , then the value of  $x - x^2$  is:

यदि 
$$\frac{x}{a} = \frac{1}{a} - \frac{1}{x}$$
 है, तो  $x - x^2$  का मान है-

- (A) -a
- (B)  $\frac{1}{a}$
- (C) a
- (D)  $-\frac{1}{a}$

Correct Option : C

Explanation:

(C) 
$$\frac{x}{a} = \frac{1}{a} - \frac{1}{x}$$

$$\frac{x}{a} - \frac{1}{a} = -\frac{1}{x}$$

$$\frac{x-1}{a} = -\frac{1}{x}$$

$$\frac{1-x}{a} = \frac{1}{x}$$

$$x(1-x)=a$$

$$x - x^2 = a$$

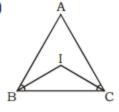
## Question (163)

I is the incentre of a triangle ABC. If  $\angle$ ACB = 55° and  $\angle$ ABC = 65°, then the value of  $\angle$ BIC is:

I त्रिभुज ABC का अंत:केन्द्र है। यदि ∠ACB =  $55^{\circ}$  तथा ∠ABC =  $65^{\circ}$  हो, तो ∠BIC ज्ञात करें।

- (A) 130°
- (B) 120°
- (C) 140°
- (D) 110°

Correct Option : B Explanation :



We know that

$$\angle BIC = 90 + \frac{1}{2} \angle A$$

$$\angle BIC = 90 + \frac{1}{2} \times 60$$

$$90 + 30$$

## Question (164)

If x =  $3 - \sqrt{8}$ , then find the value of  $x^4 - \frac{1}{x^4}$ .

यदि  $\mathbf{x}=3-\sqrt{8}$  , तो  $\mathbf{x}^4-\frac{1}{x^4}$  का मान ज्ञात करें।

- (A) 816√2
- (B) 814√3
- (C) 830
- (D) 835

Correct Option : A

Explanation:

(A) 
$$x = 3 - \sqrt{8}$$

$$\frac{\frac{1}{x} = 3 + \sqrt{8}}{x + \frac{1}{x} = 6} \qquad \dots (i)$$

So, 
$$x - \frac{1}{x} = \sqrt{36 - 4} = \sqrt{32}$$
 ...(ii)

$$(x^2)^2 - \left(\frac{1}{x^2}\right)^2$$

$$= \left(x^2 + \frac{1}{x^2}\right) \left(x^2 - \frac{1}{x^2}\right)$$

$$= 34\left(x + \frac{1}{x}\right) \left(x - \frac{1}{x}\right)$$

$$= 34 \times 6 \times \sqrt{32}$$

= 
$$34 \times 6 \times \sqrt{2 \times 2 \times 2 \times 2 \times 2}$$

$$= 34 \times 6 \times 4\sqrt{2}$$

## Question (165)

Find the minimum value of  $27^{\sin 3\theta} \times 81^{\cos 3\theta}$ .  $27^{\sin 3\theta} \times 81^{\cos 3\theta}$  का न्यूनतम मान ज्ञात करें।

Correct Option : A Explanation :

(A) 
$$27\sin 3\theta \cdot 81\cos 3\theta$$
  
=  $3^3 \sin 3\theta \cdot 3^4 \cos 3\theta$   
=  $3^3 \sin \theta + 4 \cos \theta$   
=  $3^{-5}$   $(\because a \sin \theta + b \cos \theta)$   
 $\min = -\sqrt{a^2 + b^2}$ 

#### Question (166)

Perimeter of a rhombus is 2P unit and sum of length of diagonals is m unit, then area of the rhombus is:

एक समचतुर्भुज का परिमाप 2P इकाई है और विकर्णों की लम्बाई का योग m इकाई है, तो समचतुर्भुज का क्षेत्रफल कितना है?

- (A)  $\frac{1}{4}$  m<sup>2</sup>P sq. unit/वर्ग इकाई
- (B)  $\frac{1}{4}$  m<sup>2</sup>P sq. unit/वर्ग इकाई
- (C)  $\frac{1}{4}$  (m<sup>2</sup> P<sup>2</sup>) sq. unit/वर्ग इकाई
- (D)  $\frac{1}{4}$  (P<sup>2</sup> m<sup>2</sup>) sq. unit/वर्ग इकाई

Correct Option: C

Explanation:

(C) Perimeter of rhombus

$$2a = P$$

$$\Rightarrow$$
 4a<sup>2</sup> = P<sup>2</sup>

We know,

 $d_1^2 + d_2^2 = 4a^2$  (when  $d_1 d_2$  are diagonals)

$$d_1 + d_2 = m$$
  
 $(d_1 + d_2)^2 = m^2$ 

$$(d_1 + d_2)^2 = m$$

$$d_1^2 + d_2^2 + 2d_1d_2 = m^2$$

$$P^2 + 2d_1d_2 = m^2$$

Area of rhombus =  $\frac{1}{2} d_1 d_2$ 

$$=\frac{1}{4}(m^2-P^2)$$

#### Question (167)

Three sides of a triangular field are of length 15 m, 20 m and 25 m long respectively. Find the cost of sowing seeds in the field at the rate of Rs.15 per sq. m.

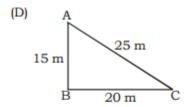
किसी त्रिभ्जाकार क्षेत्र की भ्जाएं 15 मी., 20 मी. तथा 25मी. है। रु.15 प्रति वर्ग मी. की दर से क्षेत्र में बीज बोने का खर्च

## ज्ञात करे|

(A)Rs.3000 (B)Rs.6000

(C)Rs.7500 (D)Rs.2250

Correct Option : D Explanation :



15, 20, 25 form a triplet Clearly =  $25^2$  =  $15^2$  +  $20^2$  $\Delta$ ABC is a right angled triangle

Area of right  $\triangle ABC = \frac{1}{2} \times AB \times BC$ 

$$=\frac{1}{2} \times 15 \times 20 = 150 \text{ sq. m}$$

cost of sowing seeds = 150 × 15 = ₹ 2250

## Question (168)

The average of first three numbers is double of the forth number. If the average of all the four numbers is 12. Find the 4th number. प्रथम 3 संख्याओं का औसत, चौथी संख्या का दोगुना है। चारों संख्याओं का औसत 12 हो। चौथी संख्या ज्ञात करें।

- (A) 16
- (B)  $\frac{48}{7}$
- (C) 20
- (D)  $\frac{18}{7}$

Correct Option : B Explanation :

(B) Let the four numbers are a, b, c, d

$$\frac{a+b+c+d}{4} = 12$$

$$a + b + c + d = 48$$

Also, 
$$\frac{a+b+c}{3} = 2d$$

$$a + b + c = 6d$$

$$a + b + c + d = 48$$

$$6d + d = 48$$

$$7d = 48$$

$$d = \frac{48}{7}$$

#### Question (169)

The distance between two pillers of length 25 m and 36 m is x m. If two angles of elevation of their respective tops from the bottom of the other are complementary to each other, then the value of x (in meters) is:

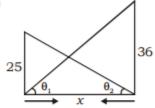
25 मी. तथा 36 मी. लंबे दो खम्भों के बीच की दूरी x मी. है। यदि एक खम्भे के शीर्ष का दूसरे के आधार से तथा दूसरे के शीर्ष का पहले के आधार से उन्नयन कोण परस्पर पूरक है, तो खम्भों के बीच दूरी ज्ञात करें।

- (A) 30 m/中.
- (B) 16 m/中.
- (C) 15 m/中
- (D) 9 m/मी.

Correct Option: A

Explanation:

A)



If 
$$\theta_1 + \theta_2 = 90^\circ$$

then 
$$x = \sqrt{h_1 h_2}$$
 (h = height of towers)

$$x = \sqrt{25 \times 36}$$

$$x = 30 \text{ m}$$

## Question (170)

Each internal angle of regular polygon is two times its external angle. Then the number

of sides of the polygon is: किसी बहुभुज का आंतरिक कोण उसके बाह्य कोण का दो गुना है। बहुभुज की भुजाओं की संख्या ज्ञात करें।

- (B) 6 (D) 7
- (A) 8 (C) 5

Correct Option : B Explanation:

#### (B) According to question

Given:

interior angle = 2 × exterior angle
As we know that
interior angle + exterior angle = 180°
2 × exterior angle + exterior angle = 180°
3 exterior angle = 180°

No. of sides =  $\frac{360^{\circ}}{\text{Exterior angle}}$ 

No. of sides = 
$$\frac{360^{\circ}}{60^{\circ}}$$
 = 6

exterior angle = 60°

#### Question (171)

The sum of two number is 37 and the difference of their squares is 185, then the difference of the two numbers is:

दो संख्याओं का योग 37 है ओर उनके वर्गों का अंतर 185 है, तो संख्याओं का अंतर क्या है?

(A) 4 (B) 5

(C) 3 (D) 10

Correct Option: B

Explanation:

(B) Given:

$$a + b = 37$$

$$a^2 - b^2 = 185$$

$$a^2 - b^2 = (a + b) (a - b)$$

$$185 = 37 (a - b)$$

$$(a - b) = 5$$

#### Question (172)

If 
$$(a - b) = 3$$
,  $(b - c) = 5$  and  $(c - a) = 1$ , then

the 
$$\frac{a^3 + b^3 + c^3 - 3abc}{a + b + c}$$
 will be:

$$\frac{a^3+b^3+c^3-3abc}{a+b+c}$$
 होगा-

- (A) 17.5
- (B) 20.5
- (C) 10.5
- (D) 15.4

#### Correct Option: A

Explanation:

(A) 
$$\therefore \frac{a^3 + b^3 + c^3 - 3abc}{a + b + c}$$

$$= \frac{1}{2} \left[ (a-b)^2 + (b-c)^2 + (c-a)^2 \right]$$

$$= \frac{1}{2}(3^2 + 5^2 + 1^2)$$

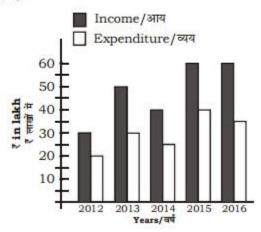
$$= \frac{1}{2}(9 + 25 + 1)$$

= 17.5

#### Question (173)

## Direction (73-75): Read the graph and answer the following questions.

निर्देश (73-75) : नीचे दिए गए आलेख को ध्यानपूर्वक पढ़े और उत्तर दें।



What is the difference in profit between 2013 and 2014 (in lakhs of rupees)?

वर्ष 2013 तथा 2014 के बीच लाभ का अन्तर (लाखों में) होगा?

- (A) No profit (B) 5
- (C) 10 (D) 15

Correct Option : B

Explanation:

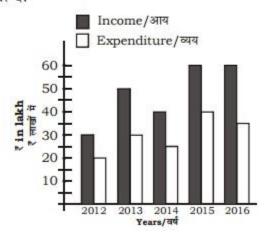
(B) Profit of 2013 = 50 - 30 = ₹ 20 lakh Profit of 2014 = 40 - 25 = ₹ 15 lakh

Difference = ₹ 5 lakh

#### Question (174)

Direction (73-75): Read the graph and answer the following questions.

निर्देश (73-75) : नीचे दिए गए आलेख को ध्यानपूर्वक पढ़े और उत्तर दें।



The ratio of the average income of all the years to the average profit is:

सभी वर्षों में औसत आय का, औसत लाभ से अनुपात बतायें|

(A) 24:13

(B) 48:17

(C) 12:7

(D) 8:3

Correct Option: D

Explanation:

Average income of all year

$$=\frac{30+50+40+60+60}{5}$$

$$=\frac{240}{5}$$
 = ₹ 48 lakhs

Average profit of all year

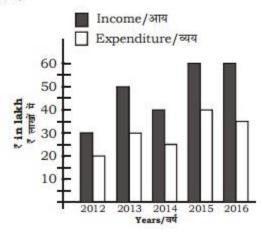
$$=\frac{10+20+15+20+25}{5}=\frac{90}{5}=18$$

So, ratio is 48: 18 = 8:3

#### Question (175)

# Direction (73-75): Read the graph and answer the following questions.

निर्देश (73-75) : नीचे दिए गए आलेख को ध्यानपूर्वक पढ़े और उत्तर दें।



The total income exceeds the total expenditure by:

वर्ष 2012 से 2016 तक कुल आय, कुल खर्च कितने लाख अधिक है?

- (A) 90 lakhs/लाख
- (B) 105 lakhs/लाख
- (C) 115 lakhs/लाख
- (D) 120 lakhs/लाख

Correct Option : A

Explanation:

(A) Total income from 2012 to 2016 = 30 + 50 + 40 + 60 + 60 = 240 lakhs Total expenditure from 2012 to 2016 = 20 + 30 + 25 + 40 + 35 = 150 lakhs Difference = 240 - 150 = 90 lakhs

#### Question (176)

Direction: In Question nos. 76 to 78 some part of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the oval corresponding to the appropriate letter (A), (B), (C). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet.

Reena is the woman who (A)/ I know (B)/ you can always rely upon. (C)/ No error (D)

Correct Option: A

## Question (177)

It was with great difficulty (A)/ that each of the brothers (B)/ could get their share of property. (C)/ No error (D)

Correct Option: C

#### Question (178)

She could not continue her study (A)/ because her means (B)/ were poor. (C)/ No error (D)

Correct Option: D

#### Question (179)

Correct Option: B

Directions: In Question nos. 79 to 81, sentences given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval in the Answer Sheet. In a survey conducted by a library, it was recently \_\_\_\_\_ that parents wish their children to read books with high moral content. (A) revealed (B) concurred (C) exposed (D) inferred Correct Option : A Question (180) I forbid you \_\_\_\_\_ there again. (A) going (B) not to go (C) to go (D) forego Correct Option: C Question (181) RBI will impart no information \_\_\_\_\_ anyone regarding demonetisation of Rs.500 and Rs.1000 notes. (A) with (B) to (C) for (D) from

#### Question (182)

<b>Directions: In question nos.</b>	82 to 83, out of t	he four alternative	ves, choose the	one which best
expresses the meaning of th	e given word.			

**STRATAGEM** 

- (A) Ruby (B) Trick
- (C) Strait (D) Stratum

Correct Option: B

## Question (183)

**FORSAKE** 

- (A) Forego (B) Disintegrate
- (C) Separate (D) Abandon

Correct Option: D

#### Question (184)

Directions : In question nos. 84 to 85, choose the word opposite in meaning to the given word.

**DREARY** 

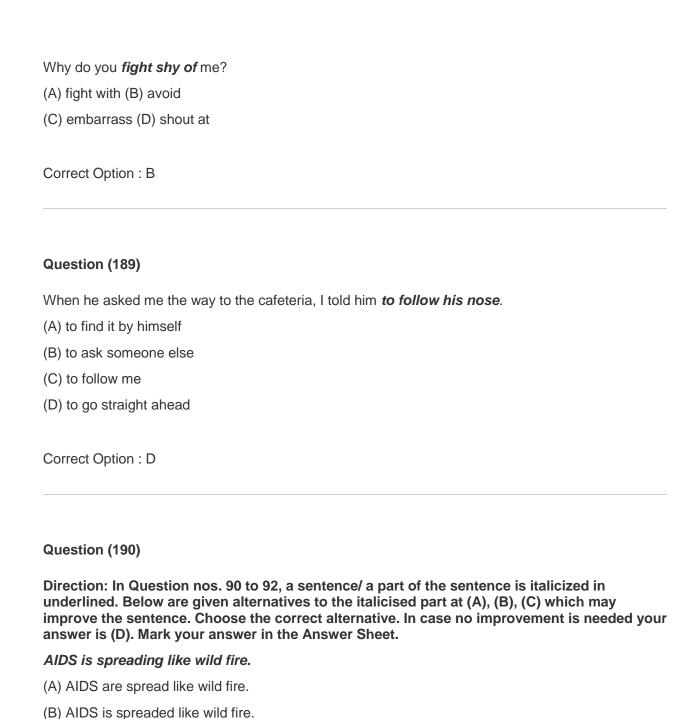
- (A) Dribble (B) Unusual
- (C) Interesting (D) Solitary

Correct Option: C

#### Question (185)

KEEN
(A) Indifferent (B) Clever
(C) Immobile (D) Impassioned
Correct Option : A
Question (186)
Directions: In question nos. 86, four words are given in each question, out of which only one word is spelt correctly/wrongly out of them. Find the word spelt correct/wrong and mark your answer in the Answer Sheet.
(A) Privilege (B) Priviledge
(C) Privalege (D) Privelege
Correct Option : A
Question (187)
Direction: In Question nos. 87 to 89, four alternative are given for the Idiom/Phrase in bold in below sentences. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.
They have <i>latched on to</i> tourism as a way of boosting the local economy.
(A) promoted
(B) discovered
(C) exposed
(D) explored
Correct Option : A

## Question (188)



(C) AIDS has been spread like wild fire.

(D) No improvement

Correct Option: D

#### Question (191)

#### I hope to talk him over to our view.

- (A) I hope to talk him on to our view.
- (B) I am hoping to talk him our view.
- (C) I hope to talked him for our view.
- (D) No improvement

Correct Option: D

#### Question (192)

## Copernicus proved that Earth moves around the sun.

- (A) Copernicus proves that Earth moves around the sun.
- (B) Copernicus proved that the Earth moves round the sun.
- (C) Copernicus proved the Earth moved around the sun.
- (D) No improvement

Correct Option: B

#### Question (193)

Direction: In Question nos. 93 to 95, in the following question, out of the four alternatives, choose the one which can be substituted for the given sentence.

A small village or a group of houses

- (A) Community (B) Settlement
- (C) Hamlet (D) Colony

Correct Option: C

#### Question (194)

Underground place for storing wine or other provisions

- (A) Garage (B) Cellar
- (C) Attic (D) Hall

Correct Option: B

#### Question (195)

A list of explanations of rare, technical or obsolete words

- (A) Dictionary (B) Glossary
- (C) Lexicon (D) Catalogue

Correct Option: C

#### Question (196)

Direction (Q. No- 96 - 100): In these question you have two brief passages with six questions following the passage. Read the passage carefully and choose the best answer to each question out of the four alternatives.

#### Passage - 1

Freedom has assuredly given us a new status and new opportunities. But it also implies that we should discard selfishness, laziness and all narrowness of outlook. Our freedom suggests toil and creation of new values of old ones. We should so discipline ourselves as to be able to discharge our new responsibilities satisfactorily. If there is any one thing that needs to be stressed more than any other to the new set-up, it is that we should put into action our full capacity, each one of us in productive effort - each one of us in his own sphere, however humble. Work, unceasing work, should now be our watch-word. Work is wealth, and service is happiness. Nothing else is. The greatest crime in India today is idleness. If we root out idleness, all our difficulties, including even conflicts, will gradually disappear.

Nothing else can give us joy except

- (A) idleness
- (B) wealth

(0)	freedo	m
$( \cup )$	rreeac	m

(D) service

Correct Option: D

#### Question (197)

Freedom has assuredly given us a new status and new opportunities. But it also implies that we should discard selfishness, laziness and all narrowness of outlook. Our freedom suggests toil and creation of new values of old ones. We should so discipline ourselves as to be able to discharge our new responsibilities satisfactorily. If there is any one thing that needs to be stressed more than any other to the new set-up, it is that we should put into action our full capacity, each one of us in productive effort - each one of us in his own sphere, however humble. Work, unceasing work, should now be our watch-word. Work is wealth, and service is happiness. Nothing else is. The greatest crime in India today is idleness. If we root out idleness, all our difficulties, including even conflicts, will gradually disappear.

Anyone can free himself from the clutches of difficulties, if he

- (A) fulfils his responsibilities
- (B) discards idleness
- (C) discharges his obligations
- (D) eliminates narrow outlook

Correct Option: B

#### Question (198)

Freedom has assuredly given us a new status and new opportunities. But it also implies that we should discard selfishness, laziness and all narrowness of outlook. Our freedom suggests toil and creation of new values of old ones. We should so discipline ourselves as to be able to discharge our new responsibilities satisfactorily. If there is any one thing that needs to be stressed more than any other to the new set-up, it is that we should put into action our full capacity, each one of us in productive effort - each one of us in his own sphere, however humble. Work, unceasing work, should now be our watch-word. Work is wealth, and service is happiness. Nothing else is. The greatest crime in India today is idleness. If we root out idleness, all our difficulties, including even conflicts, will gradually disappear.

What has freedom undeniably offered to the citizens of India?

- (A) New outlook
- (B) New responsibilities
- (C) New values
- (D) New opportunities

Correct Option: D

#### Question (199)

Freedom has assuredly given us a new status and new opportunities. But it also implies that we should discard selfishness, laziness and all narrowness of outlook. Our freedom suggests toil and creation of new values of old ones. We should so discipline ourselves as to be able to discharge our new responsibilities satisfactorily. If there is any one thing that needs to be stressed more than any other to the new set-up, it is that we should put into action our full capacity, each one of us in productive effort - each one of us in his own sphere, however humble. Work, unceasing work, should now be our watch-word. Work is wealth, and service is happiness. Nothing else is. The greatest crime in India today is idleness. If we root out idleness, all our difficulties, including even conflicts, will gradually disappear.

One thing needs to be stressed more than anything else in this new set-up. It is that people should

- (A) discipline themselves suitably
- (B) work to their full capacity
- (C) substitute old values with new ones
- (D) discard narrowness of outlook

Correct Option: B

#### Question (200)

Freedom has assuredly given us a new status and new opportunities. But it also implies that we should discard selfishness, laziness and all narrowness of outlook. Our freedom suggests toil and creation of new values of old ones. We should so discipline ourselves as to be able to discharge our new responsibilities satisfactorily. If there is any one thing that needs to be stressed more than any other to the new set-up, it is that we should put into action our full capacity, each one of us in productive effort - each one of us in his own sphere, however humble. Work, unceasing work, should now be our watch-word. Work is wealth, and service is happiness. Nothing else is. The greatest crime in India today is idleness. If we root out idleness, all our difficulties, including even conflicts, will gradually disappear.

\_\_\_\_\_ work should be the motto of our citizens.

- (A) Incessant
- (B) Productive
- (D) Ingenious
- (D) Resourceful

Correct Option : B