



RPF Constable

Memory Based Questions (Full Paper)

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1. The famous Konark Sun temple was built by whom?

- A. Narshimhadeva I
- B. Angabhima deva I
- C. Konkanivarman
- D. Narsimhavarman

Ans. A

Sol. The 13th-century famous **Konark Sun temple** was built by King **Narshimhadeva I** at Konark, Odisha around AD1250.

2. The idea of preamble has been borrowed in Indian Constitution from the Constitution of

- A. Italy
- B. Canada
- C. France
- D. U. S. A.

Ans. D

Sol. The idea of the objectives of the Indian Constitution has been taken from the Constitution of the United States, the idea of Republican Constitution from France, the constitutional arrangement from the Constitution of Canada and the parliamentary system idea have from the constitution of England.

3. Who among the following is addressed as the Chairman of Rajya Sabha?

- A. Prime Minister
- B. Chief Justice
- C. Vice President
- D. Attorney General

Ans. C

Sol. The Vice-President of India (currently, Venkaiah Naidu) is the ex-officio Chairman of the Rajya Sabha, who presides over its sessions. The Deputy Chairman, who is elected from amongst the house's members, takes care of the day-to-day matters of the house in the absence of the Chairman.

4. Study of internal structure of organism is called _____.

- A. Agrostology
- B. Agronomy
- C. Anatomy
- D. Agrology
- E. None of these

Ans. C

Sol. **Anatomy** is the branch of **biology** concerned with the **study of the structure of organisms and their parts.**

5. What is the currency of Indonesia?

- A. Rufiyaa
- B. Rial
- C. Yen
- D. Rupiah
- E. None of these

Ans. D

Sol. **Jakarta** is the capital and Rupiah is the currency of **Indonesia.**

Note:- Indonesia is a country in **Southeast Asia** situated between the **Indian and Pacific oceans.** It is the **world's largest** island country, with more than **thirteen thousand** islands.

6. Where was the 13th G20 Summit 2018 organized ?

- A. Washington DC
- B. Paris
- C. New Delhi
- D. Buenos Aires

Ans. D

Sol. The **13th G20 Summit 2018** was organized in **Buenos Aires , Argentina.**

- The summit was organised from **November 30 to December 1, 2018.**

- Prime Minister **Narendra Modi** participated in this Samiti.
- The theme of the G20 summit is **"Building Consensus for a Fair and Sustainable Development"**.

7. What is atomic number of Helium?

- A. 2
- B. 4
- C. 7
- D. 12

Ans. A

Sol. Helium has atomic number 2 (Two).

- The symbol He represents Helium.
- The atomic number is the number of protons present in the nucleus of an atom.

8. Which mirror can be used to view a tall building in a small mirror?



- A. Plane mirror
- B. Convex mirror
- C. Concave mirror
- D. Plano-convex mirror

Ans. B

Sol. * Convex mirror gives diminished images of far-off distance clearly
* So, convex mirror can be used to view a tall building in a small mirror

9. How many chromosome pairs are in a human body?

- A. 24
- B. 19
- C. 22
- D. 23

Ans. D

Sol.

- In humans, there are **23 pairs** of chromosomes, for a total of 46.
- Twenty-two of these pairs are autosomes which are similar in male & female.
- The 23rd pair is called autosome (the sex chromosome) which is different in males and females.

10. The thymus gland produces a hormone called

- A. thyroxine
- B. thymosin
- C. thyronine
- D. calcitonin

Ans. B

Sol. Thymus gland produces a hormone called thymosin. This hormone stimulates the growth of T-Cell- which is a subtype of white blood cells that helps in building immunity in the body.

11. Who generally presents the Finance Budget in Indian Parliament?

- A. RBI Governor
- B. Budget Minister
- C. Finance Minister
- D. Finance Secretary

Ans. C

Sol. Finance budget is tabled by the finance minister in the Indian parliament. It is presented on 1st of February in the Loksabha by the finance minister and later

on it is tabled in rajya sabha for discussions. This document is an annual financial statement showing item wise estimates of expected revenue and anticipated expenditure during a fiscal year.

12. Which country on December 12, 2018 banned outdoor smoking ?

- A. USA
- B. UK
- C. Sweden
- D. Switzerland

Ans. C

Sol. The **Sweden Government** has banned **outdoor smoking** in certain public places, including **playgrounds** and **train station platforms**.

- It was announced on **12th December, 2018**.
- In Sweden, smoking is currently allowed in designated smoking areas in most workplaces and public places.
- According to the new law, the goal is to make the Scandinavian country **smoke-free** by **2025**.

13. The discoverer of penicillin was

- A. Lord Lister
- B. Alexander Fleming
- C. Karl Landsteiner
- D. Walter Reed

Ans. B

Sol. Penicillin, the first true antibiotic, was discovered by **Alexander Fleming**, Professor of Bacteriology at St. Mary's Hospital in London.

Penicillins are a certain collection of antibiotics that eliminate infection causing bacteria. Also known in short as pen or PCN, they originate from a type of fungi called Penicillium fungi. They are used in the treatment or prevention of many different bacterial infections, usually caused by Gram-positive organisms.

14. Which is the largest endocrine gland?

- A. Thyroid
- B. Adrenal glands.
- C. Pineal body.
- D. Reproductive glands



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Ans. A

Sol. The thyroid gland is the largest purely endocrine gland. It is located at the front of the neck above the top of the breastbone. It consists of two main lobes on either side of the trachea that are connected by a narrow band of tissue called the isthmus.

15. Which of the following is the strongest force?

- A. Atomic force
- B. Gravitational forces
- C. Electromagnetic force
- D. Nuclear force

Ans. D

Sol. The **4 fundamental forces** of nature are:

1. Electromagnetic force
2. Gravitational force
3. Strong nuclear force
4. Weak nuclear force.

All other forces derives from these 4.

The **strongest is the Strong nuclear force**, followed by the Electromagnetic force, followed by the Weak nuclear force and last but not least the Gravitational force.

16. The Government recently announced NITI Aayog to replace

- A. Planning Commission
- B. National Development Council
- C. Law Commission
- D. Inter State Council
- E. Competition Commission

Ans. A

Sol. 1. **NITI Aayog** is a Government of India policy think-tank established by Prime Minister Narendra Modi after his having dissolved the Planning Commission. Pronounced nithi, meaning "policy" in Hindi, the acronym stands for National Institution for Transforming India.

17. Which monument is known as "The National Monument of India"?

- A. India Gate
- B. Gateway of India
- C. Raj Ghat
- D. Red fort

Ans. A

Sol. India gate is known as the national monument of India. It was made after the world war 1 in the memory of Indian soldiers who died fighting for the British empire.

18. The chemical name for common salt _____.

- A. Sodium chloride
- B. Sodium hydroxide
- C. Sodium chlorate
- D. Potassium chloride

Ans. A

Sol. **Sodium chloride** is also known **common salt** is an ionic compound with the chemical formula **NaCl**, representing a 1:1 ratio of sodium and chloride ions.

19. Which elements are paired correctly with these chemical symbols? Ca, C, Cl, Co?

- A. carbon, calcium, chlorine, copper
- B. carbon, calcium, chlorine, cobalt
- C. calcium, carbon, chlorine, copper
- D. calcium, carbon, chlorine, cobalt

Ans. D

Sol.

- Ca- calcium.
- C- carbon.
- Cl- Chlorine.
- Co- cobalt

20. 'Strikeout' is associated with which sports?

- A. Cricket
- B. Snooker
- C. Baseball
- D. Tennis

Ans. C

Sol. Strikeout is a term associated with the sport baseball. to read the various terms related to sports.

21. The Kaiga Nuclear power station is located in which state of India?

- A. Gujarat
- B. Karnataka
- C. Tamil Naidu
- D. Madhya Pradesh
- E. Maharashtra



Ans. B

Sol. **Kaiga** Generating Station is a nuclear power generating station situated at Kaiga, near the river Kali, in Uttar **Kannada district of Karnataka**, India.

22. Ghoomar is a folk dance of _____

- A. Mizoram
- B. Puducherry
- C. Gujarat
- D. Rajasthan

Ans. D

Sol. Ghoomar is a folk dance of Rajasthan.

Folk dance of various state

Mizoram- Cheraw dance

Puducherry- Garadi

Gujarat- Garba

23. Rate of change of momentum of an object is proportional to which of the following:

- A. Velocity of body
- B. Net force applied on body
- C. Mass of body
- D. None of these

Ans. B

Sol. • Momentum is defined as product of velocity and mass of an object

• Rate of change of momentum is the change in momentum with respect to time

• According to Newton's second law, rate of change of momentum is directly proportional to net force applied and is in the direction of net force

24. Konkani is the official language of _____.

- A. Chandigarh
- B. Dadra and Nagar Haveli
- C. Daman and Diu
- D. Delhi

Ans. C

Sol. Konkani is the official language of Daman and Diu and as well as Goa.

Moreover, it is also one of the 22nd scheduled languages mentioned in the 8th schedule of the Indian constitution. It is written in Devanagari script and is

spoken generally in western and southern India.

25. Instrument for measuring low temperatures is called

- A. Diagonometer
- B. Cryometer
- C. Chromatometer
- D. Cymometer

Ans. B

Sol. Instrument for measuring low temperature is called Cryometer. These are special type thermometer which are used to measure very low temperature.

26. Name the Chief Minister of Jharkhand.

- A. Babulal Marandi
- B. Arjun Munda
- C. Raghubar Das
- D. Hemant Soren

Ans. C

Sol. Raghubar Das is the Chief minister of Jharkhand state of India. He was sworn in as the 6th chief minister of Jharkhand on 28 December 2014. He is an Indian politician and belongs to Bharatiya Janata Party.

27. Who is the Commander-in-Chief of the Indian Armed Forces?

- A. Prime Minister
- B. Vice-President
- C. Chief of Army Staff
- D. President

Ans. D

Sol.

- The President of India is the Supreme Commander of the Indian Armed Forces.
- It consists of three professional uniformed services: The Indian Army, Indian Navy, and the Indian Air Force.

28. Alzheimer disease is disease associated with.....

- A. Lungs
- B. Kidney
- C. Brain
- D. Liver
- E. Spleen

Ans. C



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Sol. Alzheimer disease is neurodegenerative disease associated with brain. It is caused due to the accumulation of misfolded proteins in the brain which in the long run affects memory of the patient.

29. Gautam Buddha attained Nirvana at

- A. Patna
- B. Gaya
- C. Sarnath
- D. None of these

Ans. B

Sol.

- Bodh Gaya is an important place where Gautama Buddha attained the ultimate truth i.e. Nirvana. Bodh Gaya is also associated with other important Buddhist sculptures and sites such as Bodhi tree, Mahabodhi temple and is located in the state of India.
- Bodh Gaya is the symbol of starting point of Buddhism and the place where young prince Siddhartha from Lumbini found the ultimate truth by attaining Enlightenment and it is also the place where Gautama Buddha decided to teach every living being about the knowledge that he gained through Nirvana.

Note: Here Nirvana means enlightenment.

30. Who administers the oath of office to the President?

- A. Chief Justice of India
- B. Speaker of Lok Sabha
- C. Prime Minister
- D. Vice President

Ans. A

Sol. The **oath of the President** is administered by the **Chief Justice of India** and in his absence by the **most senior** judge of the Supreme Court.

31. When was Rolling Plan adopted in India?

- A. 1978
- B. 1975
- C. 1956
- D. 1979

Ans. A

Sol. Rolling Plan was adopted in India in **1978**.

- It was launched during the reign of **Moraraji Desai's Prime ministership**.

- Moraraji Desai Government terminated the fifth year plan in 1977 and launched its own sixth five year plan for period 1978-1983 and called it a Rolling Plan.

32. Where was India's first "Methanol Cooking Fuel Program" launched on October 5, 2018?

- A. Barauni, West Bengal
- B. Bhatinda, Punjab
- C. Numaligarh, Assam
- D. Namrup, Assam

Ans. D

Sol. The **Namrup-based Assam Petrochemicals Limited (APL)** on 5th October, 2018 rolled out the country's first **methanol**-based cooking fuel which will be cheaper than conventional LPG fuel.

- Through the programme, the **NITI Aayog** has been working on a road map to replace 20 per cent of the country's crude imports through methanol alone.

33. Two Bones are connected to each other by connective tissue called as _____

- A. tendon
- B. ligament
- C. neuron
- D. adipose

Ans. B

Sol. Two Bones are connected to each other by connective tissue called as ligament while muscles and bones are connected to each other by fibrous connective tissue called as tendon.

Hence, option B is the correct answer.

34. Tipu sultan was the ruler of _____.

- A. Hyderabad
- B. Madurai
- C. Mysore
- D. Vijayanagar

Ans. C

Sol. Tiger of Mysore **Tipu Sultan** was a ruler of the Kingdom of **Mysore**. He was



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the **eldest son** of **Sultan Hyder Ali** of Mysore.

35. Chemical formula for sulphurous acid is

- A. H_2SO_4
- B. H_2SO_3
- C. H_3SO_3
- D. H_3SO_4

Ans. B

Sol.

- Sulphurous acid is a weak inorganic acid and considered an aqueous solution of sulfur dioxide in water.
- The chemical formula for sulphurous acid is H_2SO_3 .

36. Gandhinagar is the Capital City of

- A. Himachal Pradesh
- B. Goa
- C. Gujarat
- D. Madhya Pradesh

Ans. C

Sol. Gandhinagar is the capital of the state of Gujarat in Western India. Gandhinagar is located approximately 23 km north of Ahmedabad, on the west central point of the Industrial corridor between Delhi, the political capital of India, and Mumbai, the financial capital of India.

37. How many languages are accepted in the Constitution of India?

- A. 15
- B. 20
- C. 22
- D. 28

Ans. C

Sol. According to the 92nd Constitutional amendment 2003, four new languages – Dogri, Maithili, Santali and Bodo – were added to the 8th Schedule of the Indian Constitution. The table below lists the 22 languages set out in the Eighth Schedule as of May 2008, together with the regions where they are used.

38. WHO's 2nd 'World Conference on Access to Medical Products' was held in which of the following places ?

- A. New York
- B. Paris
- C. Tokyo
- D. New Delhi

Ans. D

Sol. WHO's **2nd 'World Conference on Access to Medical Products'** was held in **New Delhi India** at from **9 -11 October 2018**.

• **Union Minister for Health of India, Jagat Prakash**

Nadda inaugurated **2nd 'World Conference on Access to Medical Products'**.

• This conference was organized in collaboration with **WHO and the Health Ministry of India**.

39. The book 'Discovery of India' was written by

- A. Dr. Ambedkar
- B. Pandit Jawaharlal Nehru
- C. M. K. Gandhi
- D. Dadabhai Navroji
- E. None of these

Ans. B

Sol. The **Discovery of India** was written by India's first Prime Minister Jawaharlal Nehru during his imprisonment in 1942–46 at Ahmednagar in Maharashtra, India. The Discovery of India is an honor paid to the rich cultural heritage of India, Hence option B is correct

40. Name the hottest planet.

- A. Mercury
- B. Venus
- C. Neptune
- D. Mars

Ans. B

Sol.

- Mercury is the **planet** that is closest to the sun and therefore gets more direct heat, but even it isn't the **hottest**.
- Venus is the second **planet** from the sun and has the temperature that is maintained at 462 degrees Celsius, no matter where you go on the **planet**. It is the **hottest planet** in the **solar system**.



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41. Which of the following is the highest peak in the Nilgiri ?

- A. Kattadadu
- B. Kolibetta
- C. Doddabetta
- D. Derbetta

Ans. C

Sol. **The Doddabetta** is the **highest** mountain in the **Nilgiri Hills**.

- Its height is **2637** metres.
- There is a reserved forest area around the peak.
- It is the **second** highest peak in **South India**.
- The hill of Nilgiris is a meeting place of the Western Ghats and the Eastern Ghats.

42. The 'National Sports Day' is celebrated on which day?

- A. 29th September
- B. 14th November
- C. 29th August
- D. 29th July

Ans. C

Sol. Every year the birth date of Hockey Magician Major Dhyan Chand is celebrated as National Sports Day on August 29. On this day, the Arjuna Award and the Rajiv Gandhi Khel Ratna Award are distributed by Yuva and Sports Mantralaya. Award winners are given prizes by the President.

43. What are the maximum number of seats fixed for Lok Sabha in India?

- A. 545 seats
- B. 552 seats
- C. 560 seats
- D. 550 seats

Ans. B

Sol. The maximum number of seats fixed by the Constitution of India for Lok Sabha is 552 but currently 545 members (including two Anglo-Indian Community members) are elected.

44. Which country's government banned VIP protocol at airport, recently ?

- A. France
- B. Israel
- C. India
- D. Pakistan

Ans. D

Sol. **Pakistan** government has banned the VIP protocol given by Federal Investigation Agency (FIA) to influential people at airports. The VIP protocol was given to politicians, legislators, senior bureaucrats, judges, military officials and journalists. The decision came into effect on 26th August. The Interior Ministry said that the ban will be strictly implemented to provide equal opportunities to all travelers. It also warned that in case any FIA official is caught giving protocol to a VIP, he would face strict action.

45. Global IT Challenge for Youth with Disabilities (GITC) 2018 was held in which of the following city ?

- A. Beijing, China
- B. Paris, France
- C. Washington DC, USA
- D. New Delhi, India

Ans. D

Sol. **Global IT Challenge for Youth with Disabilities (GITC) 2018** was held in **New Delhi, India** during **8th to 11th November, 2018**.

- This competition is amongst four categories of disabilities namely, Physical, Visual, Hearing and Intellectual.
- The competition is a testing ground for individual as well as group competencies in the field of IT.

46. Ranapratap Sagar Dam is built on which of the following rivers?

- A. Chambal River
- B. Banas River
- C. Jawai River
- D. Mahi River

Ans. A

Sol. The Ranapratap Sagar Dam is a gravity masonry dam with the height of 53.8 meters and is the second largest dam built on Chambal River in Rawatbhata, Rajasthan and the largest in whole Rajasthan.

It is one of the major dams chosen for Chambal Valley project, a government initiative for the development of the river. There is a power station at the dam toe for the generation of hydropower which



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was officially declared open in February 1970 by the then PM of India, Indira Gandhi. The dam and the power plant got there name from the warrior Maharana Pratap of Rajasthan.

47.The formula of centripetal force is

- A. Mgh
- B. Mv^2/R
- C. $1/2mv^2$
- D. None of these

Ans. B

Sol. The formula of centripetal force is Mv^2/R .

Where m stands for mass of body, v stands for velocity and R stands for circular path radius.

Important:-

• Centripetal force is the external force required when a body travels in circular path and its velocity changes continuously.

48.At which Indus Valley Site, the remains of Horse bones have been found?

- A. Daimabad
- B. Harappa
- C. Kalibanga
- D. Surkotada

Ans. D

Sol. In the **Indus Valley Civilization** the remains of **Horse bones** have been found from **Surkotada** site. The site at Surkotada is located **160 km** north-east of **Bhuj**, in the district of **Kutch**, Gujarat.

49.'No Spin' is an autobiography of

- A. Chris Gayle
- B. Glenn Maxwell
- C. Mukesh Ambani
- D. APJ Abdul Kalam
- E. Shane Warne

Ans. E

Sol. Australian spin legend Shane Warne's memoir 'No Spin: My Autobiography' will be released on October 2018.

"No Spin" is the true story behind the headlines, in Warne's own voice.

It will offer true insight and a pitch-side seat to one of cricket's finest eras, making

this one of the ultimate must-have sports autobiographies.

50.Which country has won the Hockey World Cup 2018 ?

- A. India
- B. Pakistan
- C. Belgium
- D. China

Ans. C

Sol. **Belgium** beat **Netherlands 3-2** in penalty shootout to win the title of **Hockey World Cup 2018**.

• Belgium became the **sixth** nation to win a World Cup.

• This match was held at the **Kalinga Stadium** in **Bhubaneswar** on **16th December, 2018**.

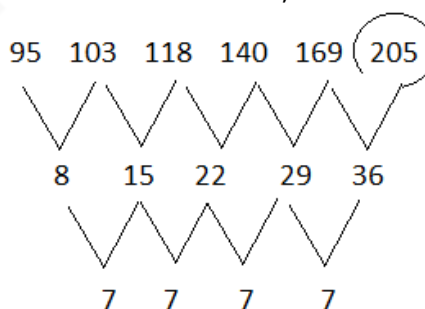
51.A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

95, 103, 118, 140, 169, ?

- A. 119
- B. 206
- C. 205
- D. 209

Ans. C

Sol. The series will be,



Hence, option C is the correct response.

52.A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

127, 130, 125, 132, 123, ?

- A. 132
- B. 134
- C. 341
- D. 413

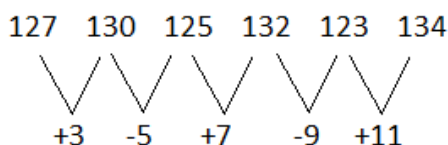


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Ans. B

Sol. The series will be,

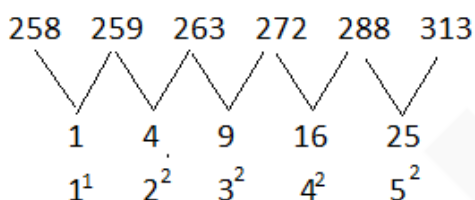


Clearly, option B is the correct response. 53. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

- A. 513
- B. 304
- C. 313
- D. 508

Ans. C

Sol.



Hence, option C is the correct response. 54. Choose the alternative which closely resembles the water-image of the given combination.

Question Figure:

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- A. **ƆAƆIΛ**
- B. **ƆAƆIΛ**
- C. **ƆAƆIΛ**
- D. **ƆAƆIΛ**

Ans. B

Sol. After observation the given figure carefully, option figure B is the correct water image of the given question figure.

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ƆAƆIΛ

Hence, option B is the correct response.

55. **Direction:** In the question, there are three statements followed by two conclusions numbered I and II. You have taken the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly

Statement:

Some choices are mistakes.

All mistakes are errors.

No error is justified.

Conclusion:

I. Some choices are justified.

II. All mistakes are not justified.

A. Only conclusion I follows

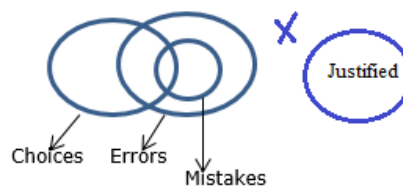
B. Only conclusion II follows.

C. Either conclusion I or conclusion II follows.

D. Neither conclusion I nor conclusion II follows.

E. Both conclusion I and conclusion II follow.

Ans. B



Sol.

Only Conclusion II is true.

Hence Option B is correct.

56.

Direction: In the following question, some statements are followed by some conclusions. Assuming the given statements to be true, find which of the two conclusions follow the given



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statements and choose appropriate answer choice.

Statements: $P < R < S < T > U$

Conclusions:

I. $U < R$

II. $T > P$. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or conclusion II follows

D. Neither conclusion I nor conclusion II follows

E. Both conclusions I and II follow

Ans. B

Sol. **Statements:** $P < R < S < T > U$

Conclusions:

I. $U < R$ (not true)

II. $T > P$ (true) { $P < R < S < T$ }

Hence only conclusion II follows.

57. In the following question, a statement is given followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

Statement: If parking space is not available in office, park your vehicles in the mall and walk to the office.

Assumptions:

(I) The mall is at a walking distance from the office.

(II) The office does not allow visitors' vehicles in its premises. A. Only assumption I is implicit.

B. Only assumption II is implicit.

C. Either assumption I or assumption II is implicit.

D. Neither assumption I nor assumption II is implicit.

E. Both assumptions I and II are implicit.

Ans. A

Sol. Correct Answer is Option A.

Assumption II is not implicit in the statement because no clue is provided whether the office allows the visitors' vehicles or not. There is even a possibility that the parking space may be overcrowded with the vehicles of the

visitors. Nothing can be concluded unless it is stated in the premises (i.e. statement).

58. In the following question, a statement is given followed by three courses of actions. A course of action is taken for improvement, follow up, etc. Read the statement carefully and give your answer.

Statement: While student capacity in our universities has increased over the years, the infrastructure has not matched the pace.

Courses of Actions:

I. India needs to build many more universities to cater to the growing aspirations of young people.

II. Every year, the Finance Ministry should include in the Union Budget a substantial amount for the betterment of the higher education sector.

III. Students should be given the scholarship to go and pursue higher education in foreign universities. A. If only course of action I follows

B. If only course of action II follows

C. If both I and II follow

D. If both II and III follow

E. If none of them follow

Ans. B

Sol. Only course of action II follows. The problem given in the statement talks about the poor infrastructure of the universities and II gives a proper solution as to how we can deal with it. The first and third courses of actions do not follow as they don't address the problem stated. Therefore, option B is the correct answer.

59. In the question below, a statement is given followed by two arguments. Choose the most appropriate option depending on which argument strengthens the given statement.

Statement: Will Pulse Polio programme eradicate polio?

Arguments:

I. Yes, the vaccines used are proven to be very effective.

II. No, many people are ignorant of such a programme. A. Only argument I is strong.



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- B. Only argument II is strong
- C. Either I or II is strong
- D. Neither I nor II is strong
- E. Both I and II are strong.

Ans. E

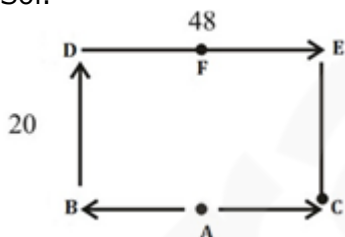
Sol. The vaccine has been proven to be effective. The success of the programme depends on the vaccine used. Hence, Argument I is strong. According to the Argument II, many people do not know about this programme, which implies all are not covered under mentioned this programme. In such a case, the disease polio cannot be eradicated completely. Hence, II is also strong.

60. House A is in the middle of house B and C. All three are standing at equal distance. House D is 20 m north of house B. House E is 48 m east of house D and to the north of house C. House F is in the middle of house D and E. What is the distance between house B and A.

- A. 20m
- B. 32m
- C. 24m
- D. Can't be determined
- E. None of these

Ans. C

Sol.



The distance between house A and house B is 24m.

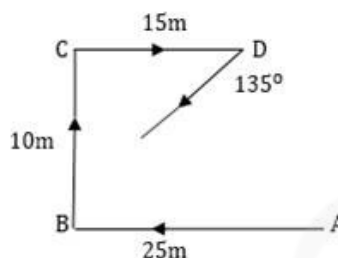
61. Pratiksha started from her hostel towards west. After walking a distance of 25m, she turned to the right and walked 10m. She then again turned to the right and walked 15m. After this she turn right at 135° and to cover 30m. In which direction she is going?

- A. West
- B. South
- C. South-West

- D. South-East
- E. None of these

Ans. C

Sol.



She is finally going into South west direction.

62. Ansh said "Mukul's only brother is the father of my daughter's father." How is Mukul related to Ansh?

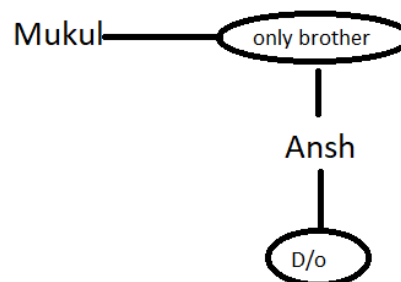
- A. Brother
- B. Father
- C. Grand Father
- D. Uncle

Ans. D

Sol. (I) Father of Ansh's Daughter father = Ansh Father

(II) Brother of Ansh's father = Ansh's Uncle

Thus, It is clear that Mukul is Uncle of Ansh.



Hence, option (D) is correct.

63. **Direction:** If

'P \$ Q', means 'P is father of Q';

'P # Q' means 'P is mother of Q';

'P * Q' means 'P is sister of Q'.

Then how is D related to N in $N \# A \$ B * D$?

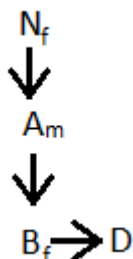


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- A. Niece
- B. Granddaughter
- C. Data inadequate
- D. None of these

Ans. C
Sol.

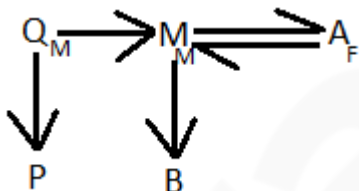


Gender of D is not specified. So the relation of D with N can not be determined.

64. P's father Q is B's paternal uncle and A's husband M is P's paternal uncle. How is A related to B if Q has only one brother?

- A. Mother
- B. Sister
- C. Cousin
- D. Daughter
- E. None of these

Ans. A
Sol.



From the above figure A is the mother of B.
65.

Direction: Study the information given below and answer the questions based on it.

- 'P × Q' means 'P is wife of Q'.
- 'P ÷ Q' means 'P is father of Q'.
- 'P + Q' means 'P is son of Q'.
- 'P - Q' means 'P is sister of Q'.

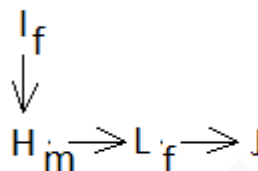
In $H + I \div L - J$, how is J related to H? A.

- Brother
- B. Sister
- C. Cousin

- D. Cant be determined
- E. None of these

Ans. D

Sol. From the given expression $H + I \div L - J$, H is son of I and Brother of L and J is either brother or sister of L and H. So answer is (d).

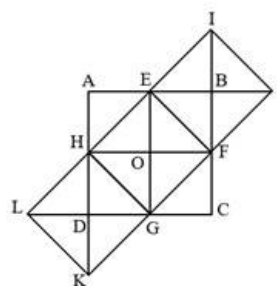


66. How many rectangle and square are there in the given figure?



- A. 15
- B. 17
- C. 19
- D. 23

Ans. A
Sol.



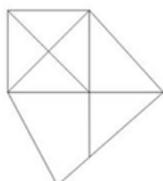
The rectangles and squares that we get from the given figure are, AEOH, EBFO, OFCG, HOGD, AEGD, EBCG, ABFH, HFCD, ABCD, EIJF, HEFG, LHGK, IJGH, EFKL and IJKL.

Thus we get 15 rectangles and squares
67. How many triangles are there in the given figure?



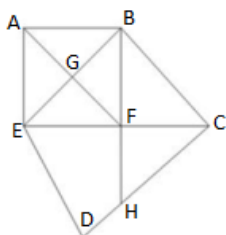
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- A. 11
- B. 12
- C. 13
- D. 15

Ans. C
Sol.

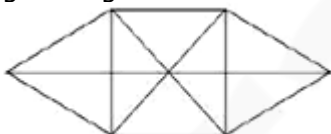


Triangles imbedded in the given figure are-

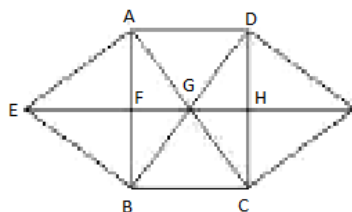
- ABG, BGF, FGE, EGA,
- ABF, BFE, FEA, EAB,
- BFC, CFH, EBC, BCH,
- EDC.

So, there are 13 triangles in the given figure.

68. How many triangles are there in the given figure?



- A. 16
 - B. 20
 - C. 22
 - D. 24
- Ans. C
Sol.



Triangles are:

- AEF, AFG, BEF, BFG, AEG, BEG, AEB, BAG,
- DGH, DHI, GCH, HIC, DIG, GIC, CID,
- CGD, AGD, BAD, CAD, BGC, ABC,
- BCD ⇒ **22** Triangles

Hence, the correct option is **C**.

69. **Direction:** Study the following information carefully and answer the question that follow them.

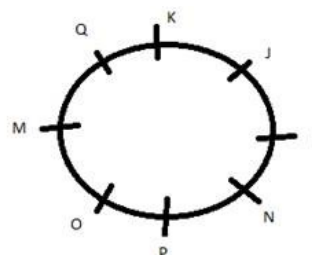
J, K, L, M, N, O, P and Q are sitting round the circle and are facing the centre. J is second to the right of N who is the neighbour of L and P. M is not the neighbour of J. P is the neighbour of O. Q is third to the right of L.

Who are neighbors of O? A. M and Q

- B. M and P
- C. N and J
- D. K and Q
- E. K and L

Ans. B

Sol. J is second to the right of N who is the neighbour of L and P. P is the neighbour of O. Q is third to the right of L. M is not the neighbour of J.



M and P are the neighbour of O.

70. **Direction:** Study the following information carefully and answer the questions given below.

Seven persons – Q, R, S, T, U, V and W – are seated in a straight line facing north but not necessarily in the same order. R is



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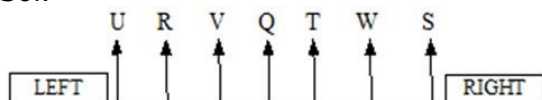
fourth to the left of W. S is on the immediate right of W. V is second to the left of T. U and R are immediate neighbours.

Who among the following is seated exactly in the middle? A. T

- B. Q
- C. V
- D. R
- E. None of these

Ans. B

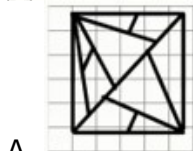
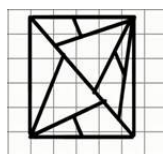
Sol.



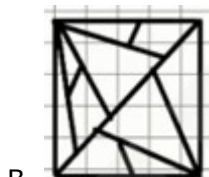
Therefore, Q is seated exact in the middle.

Hence, option B is correct.

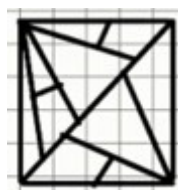
71.If a mirror is placed on the right side of given figure vertically, then which of the given answer figures is correct mirror image of given image?



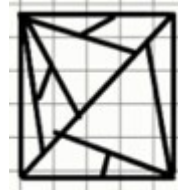
A.



B.



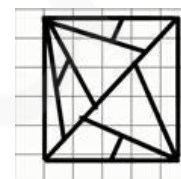
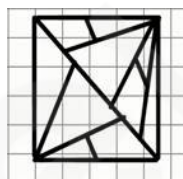
C.



D.

Ans. A

Sol. After observing the given diagram carefully, option figure A is the correct mirror image of the given question figure.



72.If $38 \# 49 = 24$ and $96 \# 51 = 21$, then $87 \# 78 = ?$

- A. 26
- B. 21
- C. 28
- D. 30

Ans. D

Sol. $38 \# 49 = 24 \rightarrow 3 + 8 + 4 + 9 = 24$

$96 \# 51 = 21 \rightarrow 9 + 6 + 5 + 1 = 21$

Similarly,

$87 \# 78 \rightarrow 8 + 7 + 7 + 8 = 30$

Thus $87 \# 78$ is equal to 30.

73.If $7 \times 8 = 49$, $4 \times 4 = 12$ and $6 \times 4 = 18$, what will 9×6 be?

- A. 54
- B. 50
- C. 45
- D. None of the above

Ans. C

Sol. From 1st, $7 \times 8 = 49 \Rightarrow 7 \times (8 - 1) = 7 \times 7 = 49$

Similarly for all $4 \times 4 = 12 \Rightarrow 4 \times (4 - 1) = 4 \times 3 = 12$

$6 \times 4 = 18 \Rightarrow 6 \times (4 - 1) = 6 \times 3 = 18$

And hence $9 \times 6 = 9 \times (6 - 1) = 9 \times 5 = 45$



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45

Hence, option C is the correct response.

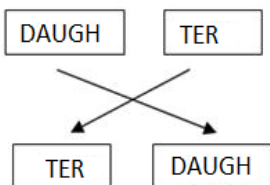
74.

If in a certain code, DAUGHTER is written as TERDAUGH how will APTITUDE be written in that code?

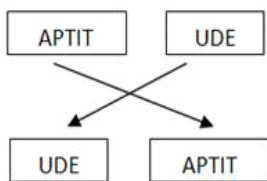
- A. DEUAPTIT
- B. UDEAPTIT
- C. DUEAPTIT
- D. DAUEPTIT

Ans. B

Sol.

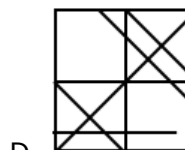
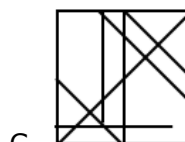
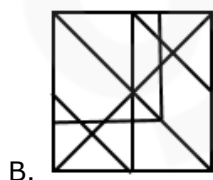
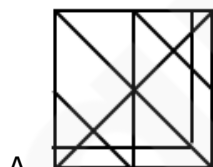
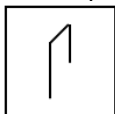


Therefore,



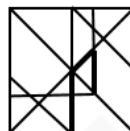
Hence, APTITUDE will be written as UDEAPTIT.

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



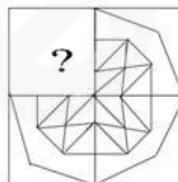
Ans. B

Sol. After observing the given diagram carefully, option figure B has the given question figure.

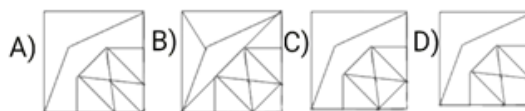


Thus, question image is hidden in option B 76. Which answer figure will complete the pattern in the question figure?

Question figure:



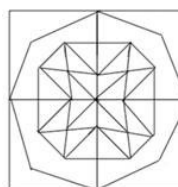
Answer figure :



- A. Figure (A)
- B. Figure (B)
- C. Figure (C)
- D. Figure (D)

Ans. A

Sol.



After observation, it is clear that, answer figure (A) will complete the question figure after placing it at question marked place.



77.

Direction: In the question below are given four statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:

All pens are pencils.
Some pencils are rubbers.
All rubbers are pages.
No page is book.

Conclusions:

- I. Some books are pencils.
 - II. Some pages are pencils.
 - III. No book is pencil.
 - IV. Some rubbers are pens.
- A. None follows
B. Only II follow
C. Only either I or III follows
D. Only either I or III and II follow
E. Only either I or III and II and IV follow

Ans. D

Sol.



Conclusion II is definitely true but out of I & III, only one can be true at one time.

78. **Direction:** In the question below are given four statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statement:

Some tables are chairs.
Some chairs are beds.

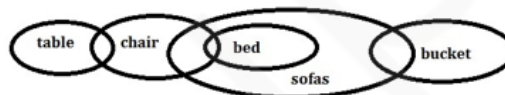
All beds are sofas.
Some sofas are buckets.

Conclusion:

- I. Some sofas are chairs.
 - II. Some beds are buckets.
 - III. Some sofas are tables.
 - IV. Some buckets are chairs.
- A. None follows
B. Only I follows
C. Only III follows
D. Only II follows
E. None of these

Ans. B

Sol. Only I Conclusion follows



79. In the following question, a statement has been given followed by two arguments numbered I and II. Based on the argument, you have to decide which of the following argument is strong and which is a weak argument.

Statement: Shiva trilogy written by Amish Tripathi is the best fiction book.

Arguments

- I. Yes, None other fiction books have three parts.
 - II. No, the best fiction book is subjective and it always differs from person to person.
- A. Only argument I is strong,
B. Only argument II is strong.
C. Either I or II is strong.
D. Neither I nor II is strong.
E. Both I and II Argument is strong.

Ans. B

Sol. Best fiction book or novel is a subjective thing and differs from person to person. Hence, the second argument is strong.

80. **Direction:** Study the following information to answer the given questions.

Eight people are sitting in two parallel rows containing four people each in such a way that there is an equal distance between adjacent persons. In row 1, A, B, C, and D are sitting (but not necessarily in the same order) and all of them are facing



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North. In row 2, P, Q, R, and S are sitting (but not necessarily in the same order) and all of them are facing South.

Therefore, in the given seating arrangement, each member sitting in a row faces another member of the other row.

S sits second to the left of Q. A faces the immediate neighbour of S. Only one person sits between A and C. P does not face A. B is not an immediate neighbour of A.

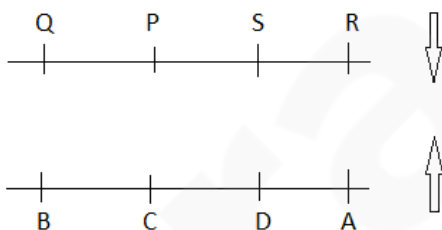
Which of the following is true regarding D? A. D sits at one of the extreme ends of the line

- B. A sits on the immediate left of D
- C. Q faces D
- D. C is an immediate neighbour of D
- E. No immediate neighbour of D faces R

Ans. D

Sol.

- S sits second to left of Q.
- A faces the immediate neighbour of S.
- Only one person sits between A and C.
- P does not face A.
- B is not an immediate neighbour of A.



81. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

B, D, H, P, ?

- A. F
- B. X
- C. y
- D. D

Ans. A

Sol. As,

$$B \xrightarrow{+2} D \xrightarrow{+4} H \xrightarrow{+8} P \xrightarrow{+16} F$$

Thus the next term in the series is F.

82. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

BDF, CFI, DHL, ?

- A. EJO
- B. EMI
- C. CJM
- D. EIM
- E. EMO

Ans. A

Sol. Clearly, the first, second and third letters of each term are respectively moved one, two and three steps forward to obtain the corresponding letters of the next term.

$$\begin{array}{cccc} B & \xrightarrow{+1} & C & \xrightarrow{+1} & D & \xrightarrow{+1} & E \\ D & \xrightarrow{+2} & F & \xrightarrow{+2} & H & \xrightarrow{+2} & J \\ F & \xrightarrow{+3} & I & \xrightarrow{+3} & L & \xrightarrow{+3} & O \end{array}$$

So, the missing term in EJO.

Hence, the answer is A.

83. In the following question, select the related word from the given alternatives.

Cytology: Cells :: ? : Words

- A. Odontology
- B. Mycology
- C. Etymology
- D. Ornithology

Ans. C

Sol. The study of cells is called cytology. Similarly the study of words is to be found out.

Odontology: The scientific study of the structure and diseases of teeth.

Mycology: The scientific study of fungi.

Etymology: The study of the origin of words and the way in which their meanings have changed throughout history.

Ornithology: The scientific study of birds. Hence, option C is the right answer.



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84. In the following question, select the related group of letters from the given alternatives.

BDGK : YWTP :: HOLI : ?

- A. SLOR
- B. SIRO
- C. ROLS
- D. AVGR

Ans. A

Sol. The sum of the alphabets is 27.

$$B(2) + Y(25) = 27$$

$$H(8) + S(19) = 27$$

$$O(15) + L(12) = 27$$

$$L(12) + O(15) = 27$$

$$I(9) + R(18) = 27$$

SLOR is the required answer.

Hence, option A is the correct response.

85. In the following question, select the odd word from the given alternatives.

- A. Bristol
- B. Geneva
- C. Zurich
- D. Berene

Ans. A

Sol. "Bristol", is the city of England while others are the cities of Switzerland.

86. find the value of ?

$$(17)^{3.5} \times (17)^? = 17^8$$

- A. 2.29
- B. 2.75
- C. 4.25
- D. 4.5

Ans. D

Sol. **Explanation:**

$$\text{Let } (17)^{3.5} \times (17)^x = 17^8$$

$$\text{Then, } (17)^{3.5+x} = 17^8$$

$$3.5 + x = 8$$

$$x = (8 - 3.5)$$

$$x = 4.5$$

87. Two factory workers Prakash and Saurabh are paid a total of 1650 per week by their employer. If Prakash is paid 120% of sum paid to Saurabh, how much is Saurabh paid per week?

- A. 600
- B. 750
- C. 900
- D. 1050

Ans. B

Sol. Saurabh is paid y.

∴ Prakash is paid = 120% of Saurabh

$$= \frac{120}{100}y = \frac{6}{5}y$$

By given condition, Prakash + Saurabh = 1650

$$\Rightarrow \frac{6}{5}y + y = 1650$$

$$\Rightarrow \frac{11}{5}y = 1650 \Rightarrow y = \frac{1650 \times 5}{11}$$

$$y = 750$$

88. A bag has Rs 20 in the form of 1-rupee, 50-paise and 10-paise coins in the ratio of 2:3:5. Find the number of 50-paise coins.

- A. 25
- B. 10
- C. 15
- D. 5

Ans. C

Sol. In a rupee, there are 2 50 paise coins and 10 10paise coins

So, ratio among Re1, 50 paise and 10 paise coins = 1 : 2 : 10

And the ratio among number of these coins in the bag = 2 : 3 : 5

Therefore, ratio between amounts of Re1, 50 paise and 10 paise coins in the bag that makes the total amount of Rs20 = 2/1 : 3/2 : 5/10

$$= 2 : 1.5 : 0.5$$

According to the question,

$$2x + 1.5x + 0.5x = 20$$

$$\Rightarrow 4x = 20$$

$$\Rightarrow x = 5$$

$$\text{Now, number of 50 paise coins} = 3 \times 5 = 15$$

89. By selling 90 pens for Rs 80 a man loses 20%. What should be the selling price (in Rs) of 90 pens for 20% profit?

- A. 90
- B. 100
- C. 110
- D. 120



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Ans. D

Sol. Selling price of 90 pens in case of loss = 80

Loss percentage = 20%

Cost price - 20% cost price = 80

80% of cost price = 80

$$\frac{80}{100} \text{ cost price} = 80$$

Cost price of 90 pens = 100

Profit percentage = 20%

Selling price = 100 + 20%100 =

120%100 = 120

Hence option D is the correct answer

90. Arrange $\frac{2}{3}, \frac{5}{6}, \frac{16}{25}, \frac{3}{7}$ in ascending order

A. $\frac{2}{3}, \frac{5}{6}, \frac{16}{25}$ and $\frac{3}{7}$

B. $\frac{16}{25}, \frac{5}{6}, \frac{3}{7}$ and $\frac{2}{3}$

C. $\frac{3}{7}, \frac{16}{25}, \frac{2}{3}$ and $\frac{5}{6}$

D. None of these

Ans. C

Sol. First, we convert each of the fraction in decimal form so here,

$$\frac{2}{3} = 0.666, \frac{5}{6} = 0.833, \frac{16}{25} = 0.64,$$

$$\frac{3}{7} = 0.428571$$

Here, $0.428571 < 0.64 < 0.666 < 0.8333$

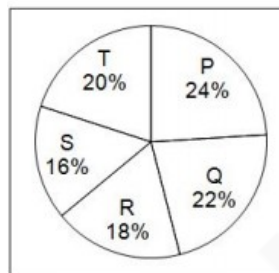
$$\frac{3}{7} < \frac{16}{25} < \frac{2}{3} < \frac{5}{6}$$

Here, $\frac{3}{7}, \frac{16}{25}, \frac{2}{3}$ and so

$\frac{3}{7}, \frac{16}{25}, \frac{2}{3}$ and $\frac{5}{6}$ are in ascending order.

91. The following pie chart shows the expenditure (in percentage) of five companies P, Q, R, S and T in the year 2016.

Total Expenditure = Rs 48 crores



What is the respective ratio between the total expenditure of company P, Q and S together to the total expenditure?

A. 31 : 60

B. 50 : 31

C. 60 : 31

D. 31 : 50

Ans. D

Sol. The total expenditure of company P, Q and S together = (24 + 22 + 16)% of 48 crores

Rs 62% of 48 crores

And Total expenditure of the company = 48 crores

∴ Required ratio = 31 : 50

92. A man's age is a% of what he was 20 years ago and b% of what he will be in 10 years. His present age is.

A. b/a

B. a/b

C. (2a + b)/(a + b)

D. (20a + 10b)/(a - b)

Ans. D

Sol. Let the present age be n.

Given, man's age is a% of what he was 20 years ago and b% of what he will be in 10 years.

$$\therefore a\% \text{ of } (n - 20) = b\% \text{ of } (n + 10)$$

$$\Rightarrow na - 20a = bn + 10b$$

$$n = (20a + 10b)/(a - b)$$

93. Ratio of the ages of Mahesh and Nilesh is 5:x. Mahesh is 18 years younger to Ramesh. After nine years Ramesh will be 47 years old. If the difference between the



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ages of Mahesh and Nilesh is same as the age of Ramesh, what is the value of x?

- A. 15.4
- B. 12.5
- C. 14.5
- D. 13.5

Ans. C

Sol. Ramesh's present

$$\text{age} = 47 - 9 = 38 \text{ years.}$$

Mahesh's present

$$\text{age} = 38 - 18 = 20 \text{ years.}$$

A/Q, Nilesh's age = Mahesh's age +

$$\text{Ramesh's age} = 20 + 38 = 58 \text{ years}$$

Now,

$$\begin{array}{r} 5 \quad 20 \\ - \quad \quad \\ x \quad 58 \\ \hline x \quad 58 \\ \hline x = \frac{58}{4} = 14.5 \end{array}$$

94. A car travels 80 km in 2 hours and a train travels 180 km in 3 hours. The ratio of speed of the car to the train is

- A. 2:3
- B. 3:2
- C. 3:4
- D. 4:3

Ans. A

Sol. Distance travelled by the car in 1 hr = $80/2 = 40\text{km}$

And distance travelled by the train in 1 hr = $180/3 = 60\text{km}$

Ratio of their speed = $40 : 60 = 2 : 3$

95. The average age of 6 persons in a committee is increased by 2 years, when two men aged 55 years and 60 years are substituted by two women. The average age of these two women is

- A. 127 years
- B. 103 years
- C. 63.5 years
- D. 51.5 years

Ans. C

Sol. Let average age of 6 persons was A and the Sum of the ages of two women is X

$$\text{So, } 6(A+2) = 6A + X - 55 - 60$$

$$\text{or, } 12 = X - 55 - 60$$

$$\text{or, } X = 55 + 60 + 12 = 127 \text{ years}$$

Therefore, the average age of the two women = $127/2 = 63.5 \text{ years}$

96. A watch having marked price as Rs 8400 is sold for Rs 5040 after two successive discounts. If the first discount is 25% then what is the second discount percentage?

- A. 15
- B. 20
- C. 25
- D. 30

Ans. B

Sol. **Short Trick:**

Marked Price = 8400

$$\text{Price after first discount} = 8400 * 3/4 = 6300$$

$$\text{Second discount} = 6300 - 5040 = 1260$$

$$\text{Second discount \%} = 1260 * 100 / 6300 = 20\%$$

Basic Method:

Marked price = 8400

Selling price = 5040

$$\text{Discount} = 8400 - 5040 = 3360$$

$$\text{First discount percentage} = 25\%$$

Let the second discount percentage be

Then

$$(100 - x)\% \text{ of } (100 - 25)\% \text{ of } 8400 = 5040$$

$$\frac{100 - x}{100} \times \frac{75}{100} \times 8400 = 5040$$

$$100 - x = 80$$

$$X = 20$$

97. By how much percent expenditure of company Q and R together greater than that of company P?

- A. 33.33
- B. 60
- C. 66.67
- D. 75

Ans. C

Sol. Expenditure of company Q and R together = $(22 + 18)\%$ of 48 crores = 40% of 48 crores

And expenditure of company P = 24% of 48 crores

∴ Required percentage difference =



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$$\frac{(40 - 24)\% \text{ of } 48}{24\% \text{ of } 48} \times 100$$

= 66.67%
98.27 is 3.6% of?

- A. 750
- B. 75
- C. 1500
- D. 1875

Ans. A

Sol. 3.6% of x = 27
 $\Rightarrow (3.6/100) \times x = 27$
 $\Rightarrow x = 27 \times (100/3.6)$
 = 750

99. A sum of money placed at compound interest doubles itself in 5 years. It will amount to eight times of itself in:

- A. 15 years
- B. 12 years
- C. 10 years
- D. 20 years

Ans. A

Sol.

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

$$\Rightarrow 2 = 1 \left(1 + \frac{R}{100} \right)^5$$

Cubing both sides,

$$2^3 = 1 \left(1 + \frac{R}{100} \right)^{15}$$

Trick:

1 become 2 in 5 years.
 $2^1 \rightarrow 5 \text{ years}$
 $8 = 2^3 \Rightarrow 3 \times 5 = 15 \text{ years}$

100. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Rs 144. The Sum is _____.

- A. Rs 180000
- B. Rs 360000
- C. Rs 90000
- D. Rs 270000

Ans. C

Sol. We know that,

$$CI - SI \text{ for } 2 \text{ years} = P \left(\frac{100}{r} \right)^2$$

$$\Rightarrow P = 144 \times \left(\frac{100}{4} \right)^2$$

= Rs90000

101. The square root

$$\frac{9.5 \times 0.0085 \times 18.9}{0.0017 \times 1.9 \times 2.1} \text{ is}$$

of

- A. 15
- B. 45
- C. 75
- D. 225

Ans. A

Sol. Expression

$$= \frac{9.5 \times 0.0085 \times 18.9}{0.0017 \times 1.9 \times 2.1}$$

= 5*5*9

= 225

∴ Required square root

$$= \sqrt{225} = 15$$

102. A certain sum of money at simple interest amounts to Rs. 1012 in 2.5 years and to Rs. 1067.20 in 4 years. The rate of interest per annum is

- A. 2.5%
- B. 3%
- C. 4%
- D. 5%

Ans. C

Sol.

If the principal be Rs. P and rate of interest by r% p.a. then

$$1012 = P + \frac{P \times r \times 5}{100 \times 2} \dots\dots\dots(ii)$$

Interest in 3/2 years (difference between 4 years and 2.5 years)

$$= 1067.20 - 1012 = \text{Rs. } 55.20$$

$$\therefore P = \frac{55.20 \times 100}{\frac{3}{2} \times r} = \frac{3680}{r}$$



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From equation (i),

$$1012 = \frac{3680}{r} + \frac{3680 \times 5}{200}$$

$$\Rightarrow 1012 = \frac{3680}{r} + 92$$

$$\Rightarrow \frac{3680}{r} = 1012 - 92 = 920$$

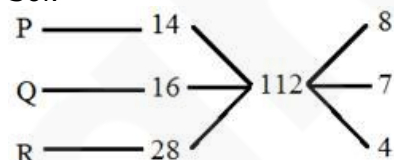
$$\Rightarrow r = \frac{3680}{920} = 4\% \text{ per annum}$$

103. Three men P, Q and R can do a piece of work in 14 days, 16 days and 28 days respectively. They started working together and P and R left the work two days before the completion of work, find the total time taken by them to finish the work.

- A. $6\frac{2}{7}$
- B. $7\frac{3}{19}$
- C. $9\frac{2}{15}$
- D. 12

Ans. B

Sol.



Since P & R left 2 days before completion of work.

So the extra work done = $(8 + 4) \times 2 = 24$ unit

So total work = $112 + 24 = 136$

So total time taken by them \Rightarrow

Total work done by P, Q and R in 1 day =

$8 + 7 + 4 = 19$ unit

Time taken

$$\frac{136}{19} = 7\frac{3}{19}$$

104. A, B, C enter into a partnership. A advances Rs 1200 for 4 months, B Rs 1400 for 8 months, and C Rs 1000 for 10 months. They gain Rs 585 together. Find the share of B?

- A. Rs 252
- B. Rs 525
- C. Rs 225
- D. Rs 522

Ans. A

Sol. The profit should be divided in the ratio of

$$1200 \times 4 : 1400 \times 8 : 1000 \times 10 = 12 : 28 : 25$$

Share of

$$B = 28 \times \frac{585}{12 + 28 + 25} = 28 \times \frac{585}{65} = \text{Rs } 252$$

105. Rita's expense is 30% more than Neha's expense and Neha's expense is 10% less than Nita's expense. If the sum of their expense is Rs. 6140, then what would be the Rita's expense?

- A. Rs 3340
- B. Rs. 2430
- C. Rs. 2330
- D. Rs. 2340

Ans. D

Sol. let Neha's expense be Rs. 100

Rita's expense = Rs. 130

Nita's expense would be $\frac{100 \times 100}{90} = \text{Rs } 1000/9$

Ratio of the expenses of Rita, Neha and Nita respectively = $130 : 100 : \frac{1000}{9}$

or $117 : 90 : 100$

Rita's expense = $\frac{117 \times 6140}{117 + 90 + 100} = \text{Rs. } 2340$

106. Divide 50 into two parts so that the sum of their reciprocals is $1/12$.

- A. 35, 15
- B. 20, 30



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C. 24, 36
D. 28, 22

Ans. B

Sol. First part = x , Second part = $50 - x$

$$\therefore \frac{1}{x} + \frac{1}{50-x} = \frac{1}{12}$$

$$\Rightarrow \frac{50-x+x}{x(50-x)} = \frac{1}{12}$$

$$\Rightarrow x(50-x) = 600$$

$$\Rightarrow x^2 - 50x + 600 = 0$$

$$\Rightarrow x^2 - 30x - 20x + 600 = 0$$

$$\Rightarrow x(x-30) - 20(x-30) = 0$$

$$\Rightarrow (x-20)(x-30) = 0$$

$$\Rightarrow x = 20 \text{ or } 30$$

107. The cost price of 4 books and 3 pencils is same as that of 6 books and 2 pencil. This cost will be same as that of which one of the following?

- A. 2 books and 6 pencils
- B. 5 books and 5 pencils
- C. 8 books and 1 pencil
- D. 12 books and 4 pencils

Ans. C

Sol. Let the cost of 1 book be 'a' and cost price of 1 pencil is b.

Given, cost price of 4 books and 3 pencils is same as that of 6 books and 2 pencil.

$$\therefore 4a + 3b = 6a + 2b$$

$$\Rightarrow b = 2a$$

$$\text{Thus total cost} = 4a + 3b = 10a$$

$$\text{From the options, for option C. total cost} = 8a + b = 10a$$

Thus option C. is the correct option.

108. The value

$$\frac{(0.73 \times 0.73 \times 0.73)^3 - (0.27 \times 0.27 \times 0.27)^3}{(0.73 \times 0.73) + (0.73 \times 0.27) + (0.27 \times 0.27)}$$

- A. 0.44
- B. 0.45
- C. 0.46
- D. 0.43

Ans. C

Sol. Let, $0.73 = a$ and $0.27 = b$

$$\text{Now expression} = \frac{a^3 - b^3}{a^2 + ab + b^2}$$

$$= \frac{(a-b)(a^2 + ab + b^2)}{a^2 + ab + b^2}$$

$$= a - b$$

$$= 0.73 - 0.27$$

$$= 0.46$$

109. If radius of a circle is increased by 5%, then the increase in its area is

- A. 10.25%
- B. 10%
- C. 5.75%
- D. 5%

Ans. A

Sol. Required percent increase =

$$x + y + \frac{xy}{100}$$

$$= 5 + 5 + \frac{5 \times 5}{100}$$

$$= 10.25\%$$

110. If a cone of radius 10.5 cm and height 12 cm is melted and constructed into cylinder of the same radius, what will be the height of this cylinder?

- A. 8 cm
- B. 1.33 cm
- C. 2 cm
- D. 4 cm

Ans. D

Sol. On melting, volume remains the same, therefore

Volume of cylinder = Volume of the cone

$$\pi r^2 H = \frac{1}{3} \pi r^2 h$$

$$\Rightarrow H = \frac{12}{3}$$

$$\Rightarrow H = 4 \text{ cm}$$

111. If $\frac{4}{5}$ of an estate be worth Rs. 16800, then the value of $\frac{3}{7}$ of it is

- A. Rs. 90000
- B. Rs. 9000
- C. Rs. 72000
- D. Rs. 21000

Ans. B



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Sol. Let the value of estate be = Rs. x
According to the question,

4/5 of $x = 16800$

$$\therefore x = \frac{16800 \times 5}{4} = \text{Rs. } 21000$$

$\therefore \frac{3}{7}$ of the value

$$= 21000 \times \frac{3}{7} = 3000 \times 3 = \text{Rs. } 9000$$

112. In our school, class 10 has three sections. These three sections of 40, 50 and 60 students appeared for their board exam and the pass percentage was 100, 90 and 80 respectively. The pass percentage of the whole 10th class batch of the school is

A. $88\frac{1}{3}\%$

B. $84\frac{2}{3}\%$

C. $88\frac{2}{3}\%$

D. $84\frac{1}{3}\%$

Ans. C

Sol. Total number of pass students

$$= 40 \times \frac{100}{100} + 50 \times \frac{90}{100} + 60 \times \frac{80}{100} = 133$$

$$\text{Total Number of students} = 40 + 50 + 60 = 150$$

$$\text{Pass Percentage} = \frac{133}{150} \times 100 = 88\frac{2}{3}\%$$

113. What was the total expenditure (in Rs crores) of the company Q, R and T together?

A. 19.2

B. 28.8

C. 24.3

D. 31.4

Ans. B

Sol. Total expenditure of the companies Q, R and T together = $(22 + 18 + 20)\%$ of 48 crores

= 60% of 48 crores

= Rs. 28.8 crores

114. The cost of manufacturing an article was ₹ 900. The trader wants to gain 25% after giving a discount of 10%. The marked price of that article should be how much?

A. ₹ 1250

B. ₹ 1200

C. ₹ 1000

D. ₹ 1500

Ans. A

Sol. **Short Trick:**

$$CP \times 125 = MP \times 90$$

$$CP/MP = 90/125$$

if $CP = 900$

$$\text{then } MP = 1250$$

Basic Method:

Let the marked price be Rs. x

Now, according to the question,

$$\frac{x \times 90}{100} = \frac{900 \times 125}{100} = 1125$$

$$\Rightarrow x = \frac{1125 \times 100}{90} = \text{Rs. } 1250$$

115. Two cyclists P and Q cycle at 20 km/hr and 25 km/hr towards each other. What was the distance (in kms) between them when they started if they met after 56 minutes?

A. 36

B. 39

C. 42

D. 45

Ans. C

Sol. Speed of cyclist are 20km/hr and 25km/hr

Relative speed with respect to each other = $20 + 25 = 45 \text{ km/hr}$

$$45 \times \frac{56}{60} = 42 \text{ km}$$

Distance = speed \times time =

116. The average of seven numbers is 18. If one of the numbers is 17 and if it is replaced by 31, then the average becomes:



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- A. 21.5
- B. 19.5
- C. 21
- D. None of these

Ans. D

Sol.

Total increment due to change = $31 - 17 = 14$

New Average = old average + $14/7$

New Average = $18 + 2 = 20$

117. In 10 hours amit can walk 8 miles more than what pankaj can in 16 hours, In 14 hours pankaj can walk 4 miles more than what amit can walk in 6 hours What is amit's speed?

- A. 4
- B. 6
- C. 7
- D. 9

Ans. A

Sol. Let the speed of Amit and Pankaj is A miles/hr and P miles/hour respectively.

We know the formula —

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

$$\therefore \text{distance} = \text{speed} \times \text{time}$$

According to question..

$$10A = 8 + 16P \dots\dots\dots(1)$$

$$14P = 4 + 6A \dots\dots\dots(2)$$

By solving equation 1 and equation 2 we get

$$A = 4, P = 2$$

So amit walks 4 miles/hour

118. Peeyush has done 1/3rd of a job in 30 days, Sanjiv completes the rest of the job in 60 days. In how many days can they together do the job?

- A. 15 days
- B. 45 days
- C. 30 days
- D. 10 days

Ans. B

Sol. let total amount of work be 180 units, then

Given: Piyush has done 1/3rd of a job in 30 days and Sanjiv completes the rest of the job in 60 days.

Thus, Efficiency of Piyush = $\frac{\frac{1}{3} \times 180}{30} = 2$ units per day

And efficiency of Sanjiv = $\frac{\frac{2}{3} \times 180}{60} = 2$ units per day

Then, working together, they shall

$\frac{180}{2+2}$
take 2+2
= 45 days.

119. 0.02% of 150% of 600 is:

- A. 0.18
- B. 1.8
- C. 18
- D. 0.018

Ans. A

Sol. 0.02% of 150 % of 600

$$= \frac{0.02}{100} \times \frac{150}{100} \times 600$$

$$= \frac{2}{100 \times 100} \times \frac{150}{100} \times 600$$

$$= 3 \times \frac{6}{100} = 0.18.$$

120. The greatest number among $2^{60}, 4^{40}, 5^{20}, 6^{10}$ is

- A. 2^{60}
- B. 4^{40}
- C. 5^{20}
- D. 6^{10}

Ans. B

$$\text{Sol. } 2^{60} = (2^6)^{10} = (64)^{10}$$

$$4^{40} = (4^4)^{10} = (256)^{10}$$

$$5^{20} = (5^2)^{10} = (25)^{10}$$

$$6^{10} = (6)^{10} = (6)^{10}$$

Greatest term = 4^{40}



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