- 1. Which one of the following is the oldest Centfal Paramilitary Force in India?
 - (a) The Central Reserve Police Force
 - (b) The Border Security Force
 - (c) The Assam Rifles
 - (d) The Commando Battalion for Resolute Action
- 2. Which of the following statements about 'Agency Houses' is/are correct?
 - 1. They were important commercial formations in the late eighteenth and nineteenth century India.
 - 2. The operation of managing agencies remained confined to Calcutta.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 3. Which one of the following statements about *Tolkappiyam* is **not** correct?
 - (a) It is a treatise on grammar.
 - (b) It was composed between first to fourth century CE.
 - (c) It was part of the Sangam corpus.
 - (d) It was composed by Panini.

- 4. Which one of the following statements about 'Princely States' in India is not correct?
 - (a) The British Government declared that States were free to join either India or Pakistan or remain independent.
 - (b) The decision to join either India or Pakistan or remain independent was left not to the people of Princely States but to the Princely Rulers.
 - (c) The Ruler of Travancore first decided to remain independent.
 - (d) The State of Travancore finally joined India through a plebiscite.
- 5. Which one of the following books was authored by Harshavardhana?
 - (a) Harshacharita
 - (b) Kadambari
 - (c) Ratnavali
 - (d) Gitagovinda
- 6. The King of Dance' is a description of
 - (a) Trimurti at Elephanta Caves
 - (b) Kaliyamardan of Krishna
 - (c) Bodhisattva Maitreya at Gandhara
 - (d) Bronze Nataraja of the Cholas
- 7. Anasagar Lake is located in which one of the following States?
 - (a) Gujarat
 - (b) Uttarakhand
 - (c) Rajasthan
 - (d) Karnataka

- 8. The World Wetland Day is celebrated on which one of the following dates every year?
 - (a) 10th June
 - (b) 13th February
 - (c) 9th March
 - $\widehat{(d)}$ 2nd February
- 9. Ganga water is being shared at Farakka with which one of the following countries?
 - (a) Nepal
 - (b) Bhutan
 - (c) Bangladesh
 - (d) Myanmar
- 10. Which one of the following is a part of Deccan Plateau?

(a) Aravalli Hills

- (b) Karbi Anglong Hills
- (c) Shivalik Hills
- (d) Vindhyan Hills
- 11. In which one of the following States, more than 50% area is under Jhum cultivation?
 - (a) Manipur
 - (b) Assam
 - (c) Sikkim
 - (d) Mizoram

- 12. 'Dhivehi' is a principal language of which one of the following Union Territories?
 - (a) Puducherry
 - (b) Ladakh
 - (c) Lakshadweep
 - (d) Jammu and Kashmir
- 13. Which of the following is/are source/ sources of Law in India?
 - 1. Constitution of India
 - 2. Statutes
 - 3. Customary Law
 - 4. Case Law

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1, 2 and 4 only
- (c) 2 and 3 only
- (d) 1, 2, 3 and 4
- 14. Which among the following is/are the function/functions of the Cabinet Secretariat?
 - 1. To ensure interministerial coordination
 - 2. Management of major crisis situations in the country

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

- 15. Which of the following statements about the Committee on Public Undertakings is/are correct?
 - There are more members from the Rajya Sabha than the Lok Sabha in the Committee.
 - The Chairperson of the Committee 2. is appointed by the Speaker of the Lok Sabha.

Select the correct answer using the code given below.

- 2 only
- Both 1 and 2
- (d) Neither 1 nor 2
- 16. Which one of the following statements is not correct?
 - (a) A censure motion can be moved against a single Minister of the Council of Ministers.
 - (b) A motion of no-confidence cannot be moved against the Minister alone.
 - (c) A censure motion cannot be moved against the entire Council of Ministers.
 - (d) A censure motion can be moved against a group of Ministers.

- 17. Which one of the following is not a thrust area of the 'Atal Mission for Rejuvenation and formation (AMRUT)'?
 - (a) Water supply
 - (b) Storm water drainage to reduce flooding
 - (c) Motorized urban transport and capacity building
 - (d) Green spaces and park
- 'nonfungible tokens' 18. Nowadays, talked about in the context of
 - (a) digital assets on a blockchain
 - (b) operations of banking correspondents' in rural areas
 - (c) multifactor authentication security requirement in banking actions
 - (d) transactions through 'small finance banks'
- 19. The term 'Sagittarius A*', sometimes mentioned in news, refers to
 - (a) a supermassive black hole in our Milky Way Galaxy
 - (b) two giant black holes spiralling around each other several lightvears away from the Earth
 - (c) a Supernova explosion seen in real time for the first time ever by scientists
 - (d) a huge asteroid that passed by very close to the Earth

- 20. Consider the following statements with reference to the latest guidelines issued by the Indian Computer Emergency Response Team (CERT-In):
 - 1. Data centres and service providers shall compulsorily report cyber security breaches within 24 hours.
 - Virtual Private Network providers shall retain user data for at least five years and share records with authorities when required.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 21. The principle of 'common but differentiated responsibilities and respective capabilities', often talked about in media, refers to
 - (a) WHO's COVID-19 Global Vaccination Drive
 - (b) contributions to the International Monetary Fund
 - (c) reduction of greenhouse gas emissions
 - (d) contributions to the United Nations
 Peacekeeping Operations
- 22. With reference to Indian economy, the term 'bad bank', frequently mentioned in news, refers to
 - (a) an asset reconstruction company
 - (b) an asset management company
 - (c) a bank with huge 'nonperforming assets'
 - (d) a bank that has become insolvent

- 23. Which one of the following was not a feature of the art of painting in India in the 19th century?
 - (a) Art was being produced for the
 - (b) The artist (Shilpi) became distinct from the artisan (Karigar).
 - (c) The technique of oil painting was developed.
 - (d) The distinction between elite and popular art widened.
- 24. As part of the Look/Act East Policy, which one of the following capitals of North-East Indian States is proposed to be connected with Bangladesh via rail route?
 - (a) Agartala
 - (b) Kohima
 - (c) Imphal
 - (d) Itanagar
- 25. Which one of the following is correct in respect of the appointment of District Judges?
 - (a) They are appointed by the Chief Justice of the concerned High Court.
 - (b) They are appointed by the President of India on the advice of the Chief Justice of the concerned High Court.
 - (c) They are appointed by the Governor in consultation with the High Court of the concerned State.
 - (d) They are appointed by the Supreme Court on the advice of the concerned High Court.

- 26. Which one of the following artworks was hailed by Sister Nivedita as the 'first masterpiece of Indian art'?
 - (a) Bharatmata by Abanindranath Tagore
 - (b) Arjuna and Subhadra by Raja Ravi Varma
 - (c) Sita in Captivity in Lanka by Abanindranath Tagore
 - (d) Sati by Nandalal Bose
- 27. 'Operation Sankalp' was initiated and implemented by the
 - (a) Indian Air Force
 - (b) Indian Army
 - (c) Indian Navy
 - (d) Ministry of Home Affairs
- 28. Which one of the following statements is not true with regard to tribal welfare?
 - (a) The Comprehensive Tribal
 Development Programme aims
 at land development activities,
 improvement of roof houses,
 infrastructure development and
 so on.
 - (b) As per the Scheduled Tribes and Other Traditional Forest Dwellers Act, villages in forests are provided with community rights.
 - (c) The Special Area Development Programme aims at distribution of forest area produces to the tribals equitably.
 - (d) The Special Central Assistance to Tribal Subplan provides dairy cows to tribal groups living below the poverty line.

- 29. Which one of the following statements is not correct?
 - (a) The 'Swarna Jayanti Shanan Rozgar Yojana' is an urban self-employment programme.
 - (b) Drought-Prone Area Programent and Desert launched in 1970s
 - (c) The 'Sampoorna Grameen Rozgar Yojana' was launched Rural restructuring the 'Integrated Rural Development Programme' in 2001.
 - (d) The 'Swarna Jayanti Grand Swarozgar Yojana' is a rural selfemployment programme.
- 30. The Battle of Rakshasi-Tangadi is popularly known as the
 - (a) Battle of Talikota
 - (b) Battle of Khanwa
 - (c) Battle of Panipat

Battle of Dharmat

- 31. Ashokan inscriptions in Afghanistan are written in which one of the following scripts?
 - (a) Brahmi
 - (b) Sharada
 - (c) Kharoshthi
 - (d) Greek-Aramaic

- 32. Which one of the following statements about coins struck during 200 BCE to 300 CE in the Indian subcontinent is not correct?
 - (a) The Indo-Greeks introduced bilingual and biscript legends on their coins.
 - (b) The Kushanas minted large quantities of gold coins as well as copper coins of low denomination.
 - (c) The Satavahanas issued coins of silver, copper, lead and potin.
 - (d) Absence of Negama coins suggests the declining power and authority of merchant guilds.
- 33. Match List-I with List-II and select the correct answer using the code given below the Lists:

List–I List–II
(Vedic name (Modern name)
of river)

- A. Drishadvati
- 1. Chenab
- B. Askini,
- 2. Chautang
- C. Vitasta
- 3. Ravi
- D. Purushni-
- 4. Jhelum

Code:

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

- 34. When was the Kothari Commission appointed by the Government of India to look into the education sector of India?
 - (a) 1967
 - (b) 1966
 - (c) \1965
 - (d) 1964
- 35. Which one of the following is not correct?
 - (a) The Gulf Stream is a warm ocean current.
 - (b) The North Atlantic Drift is a warm ocean current.
 - (c) The Labrador Current is a cold ocean current.
 - (d) The California Current is a warm ocean current.
- 36. Which of the following statements about maps are correct?
 - 1. Maps that maintain the true shapes of areas are known as conformal maps.
 - 2. Maps are used to show spatial relationships.
 - Maps cannot show route from one place to another.

Select the correct answer using the code given below.

- (a) 2 and 3 only
- (b) 1 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3



- 37. Which one of the following statements about 'great circle' is **not** correct?
 - (a) Every great circle divides the Earth into equal halves.
 - (b) Every great circle is a circumference of the Earth.
 - (c) Great circles mark the longest travel routes between locations on the Earth's surface.
 - (d) Great circle is the largest circle that can be drawn around the Earth through two particular points.
- **38.** Which one of the following statements is correct with reference to normal lapse rate?

Temperature is highest at ground level and decreases with increasing altitude.

- (b) Temperature is lowest at ground level and increases with increasing altitude.
 - (c) Temperature remains stable with increasing altitude.
 - (d) Temperature first increases with increasing altitude and gradually starts decreasing.
- **39.** Which one of the following is a tributary of the Brahmaputra River?
 - (a) Ghaggar
 - (b) Mahi
 - (c) Kosi
 - (d) Manas

40. The landmark case of D. C. Wadhwa vs.

State of Bihar in the Supreme Court is related to which one of the following powers of the Governor?

(a) To repromulgate ordinances

- (b) To appoint a Chief Minister
- (c) To grant pardon, etc.

(d) To revise the emoluments and allowances of the MLAs.

- **41.** 'Operation Flood' is also popularly known as
 - (a) the Green Revolution

(b) the White Revolution

- (c) the Blue Revolution
- (d) the Yellow Revolution
- 42. The 'Stand-Up India Scheme' is related to which one of the following issues?
 - (a) Social security during old age
 - (b) Providing technical knowhow to young, educated or skilled workers from rural areas
 - (c) Promoting entrepreneurship amongst women, SC and ST communities
 - (d) Insurance cover to people in the age group of 18-50 years

- 43. Which one of the following is not a feature of Indian federalism?
 - the interpret can Courts (a) powers and Constitution different levels of the Government.
 - revenue for of Sources (b) Union Government and the State Governments are specified.
 - Powers of the Union and the States (c) are specified in the Constitution.
 - Indian federalism is based on the principle of Separation of Powers.

- 44. Consider the following statements:
 - The early Malwa school of paintings was influenced by Shirazi school 1. while the early Mughal paintings initially followed Bihzad school.
 - The major exponents of Bihzad school in India were Sayyid Ali and 2. Abdus Samad.

Which of the statements given above is/are correct?

- 1 only (a)
- 2 only (b)
- Both 1 and 2 (c)
- Neither 1 nor 2 (d)

- Shreshtha Bharat'

 It was announced in the year 2014

 Its aim is to create an which prometric shows the sh 45. Which of the following statements about Ek Bharat Shreshtha Bharat programme is/are correct?

 - which promotes learning between the States by sharing best practices 2. and experiences,

Select the correct answer using the code given below.

- 1 only (a)
- 2 only
- Both 1 and 2
- (d) Neither 1 nor 2
- 46. Consider the following statements:
 - Mirage 2000 is a twin-engine fighter jet.
 - delta-winged X a HAL Tejas is 2. fighter jet.
 - Rafale is a hypersonic fighter jet.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only
- 1 and 3
- 3 only (d)

- 37. Which one of the following aerospace companies designed and manufactured Falcon 9', a reusable rocket?
 - (a) Blue Origin
 - (b) Boeing
 - (c) Lockheed Martin
 - (d) SpaceX
- 48. 'The Kh-47M2 Kinzhal', a nuclearcapable hypersonic missile, belongs to which one of the following countries?
 - (a) China
 - (b) France
 - (c) Russia
 - (d) USA
- 49. Mariupol city, frequently mentioned in news in the context of Russia-Ukraine conflict, is situated on the coast of
 - (a) Aral Sea
 - (b) Baltic Sea
 - (c) Caspian Sea
 - (d) Sea of Azov
- 50. Recently, with which one of following countries did India sign the Comprehensive Economic Partnership Agreement'?
 - (a) Egypt
 - (b) Israel
 - (c) South Africa
 - (d) United Arab Emirates

51. Consider the following historical events

in India carefully:

- The Indian press failed to protest against the Vernacular Press Act
- The Vernacular Press Act of 1878 was introduced by Viceroy Lytton against the counsel of his own Law

Which of the above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 52. Which of the following pairs of years and historical events is correctly matched?
 - (a) 1878: Second Anglo-Afghan War
 - (b) 1885 : Ilbert Bill Controversy
 - 1785 : Fox's India Bill
 - (d) 1898: Lord Curzon becomes the Viceroy
- 53. Which of the following sets of Indian States are landlocked and do not have an international boundary?
 - (a) Andhra Pradesh, Chhattisgarh, Haryana, Jharkhand and Madhya Pradesh
 - (b) Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh and Telangana
 - (c) Chhattisgarh, Haryana, Himachal Pradesh, Madhya Pradesh and Telangana
 - (d) Andhra Pradesh, Chhattisgarh, Haryana, Himachal Pradesh and Madhya Pradesh

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- 54. Arrange the following passes from West to East direction:
 - 1. Bara Lacha La
 - 2. Shipki La
 - 3. Jelep La
 - 4. Bomdi La

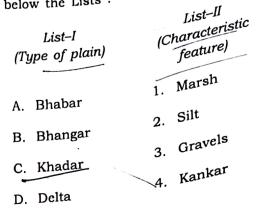
Select the correct answer using the code given below.

- (a) 1-2-3-4
- (b) 1-3-2-4
- (c) 2-3-4-1
- (d) 2-4-3-1
- 55. Which of the following statements is/are correct?
 - The jet <u>streams</u> are high altitude easterly winds.
 - 2. El Niño is a warm ocean current.
 - 3. El Niño appears along the Peru coast.

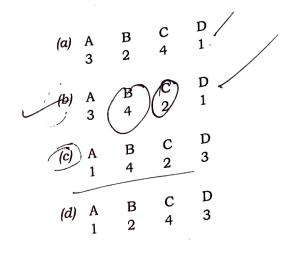
Select the correct answer using the code given below.

- (a) 1 only
- 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3

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



Code:



- **57.** A non-banking financial company cannot
 - (a) give loans
 - (b) make investments
 - (c) borrow from bank
 - seek demand deposits from public and cannot issue cheques

- 7the Swaran Singh Committee recommended the insertion of which one of the following provisions into the Constitution of India?
 - (a) Doctrine of Pleasure
 - (b) Fundamental Duties
 - (c) Nomination of Anglo-Indian Members to the Lok Sabha
 - (d) Impeachment of the President of India
- 59. The proceeds from disinvestment are included as
 - (a) non-tax revenue
 - (b) revenue receipts
 - (c) capital receipts
 - (d) tax revenue
- 60. GST is a/an
 - (a) destination-based consumption tax
 - (b) origin-based production tax
 - (b) origin-based production destination-based sales tax on transaction
 - (d) origin-based tax on sales transaction
- 61. In the first quarter of fiscal year 2020-21, GDP contracted by 23.9 percent and in the second quarter, by 7.5 percent. The Economic Survey, 2020-21 preferred to call it a recovery in
 - (a)_U-shape
 - (b) V-shape
 - (c) K-shape
 - (d) W-shape



- 62. Based on the scoring on SDG

 (Sustainable Development Goals) India
 Index, the NITI Aayog has classified various States into certain categories.
 Which one of the following is not one of the categories?
 - (a) Aspirants
 - (b) Performers
 - (c) Fast runners
 - (d) Achievers
 - 63. Who among the following is credited with the introduction and popularization of Dhrupad form of music?
 - (a) Raja Man Singh Tomar of Gwalior
 - (b) Tansen
 - (c) Naik Gopal
 - (d) Shaikh Bahauddin of Barnawa
 - 64. Who among the following is the author of the famous partition narrative,

 The Other Side of Silence?
 - (a) Amrita Pritam
 - (b) Urvashi Butalia
 - (c) Saadat Hasan Manto
 - (d) Manju Kapur

[P.T.O.

- 65. Which one of the following cities on the banks of Ganges declined in importance when the railway link to Bombay started operating?
 - (a) Benaras
 - (b) Kanpur
 - (c) Mirzapur
 - (d) Patna
- 66. When was the first All India Census attempted?
 - (a) 1871
 - (b) 1872
 - (c) 1881
 - (d) 1861
- **67.** Consider the following statements about the seaports in India:
 - 1. There are 4 major and 25 minor seaports in India.
 - 2. The major ports are under the administrative control of the Ministry of Ports, Shipping and Waterways.
 - 3. The minor ports are under the jurisdiction of respective State Maritime Board/State Government.

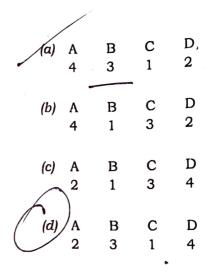
Which of the statements given above is/are correct?

- (a) 1, 2 and 3
- (b) 3 only
- (c) 1 and 2 only
- (d) 2 and 3 only

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

List-I	List ^{–II} (Headquarters)
(Regional block)	A. Brussels
B. CIS	Vicnna Vical
C. EU	3 Minsk Jakarta
D. OPEC	Ale Otto

Code:



- 69. Solifluction is a geomorphic process involving a special type of soil flow that is noticed in
 - (a) desert regions
 - (b) karst regions
 - (c) permafrost regions
 - (d) savanna regions

- 70. Which one of the following geologic time periods is associated with the first appearance of the marsupials?
 - Lower Cretaceous
 - Upper Cretaceous (b)
 - Early Jurassic (c)
 - (d) Middle Jurassic
- 71. Which of the following statements about the Border Roads Organization (BRO) is/are correct?
 - the concerned with is BRO 1. construction and maintenance of sensitive strategically in roads areas.
 - BRO undertakes snow clearance in 2. high altitude areas.

Select the correct answer using the code given below.

- 1 only (a)
- (b) 2 only
- Both 1 and 2 (c)
- (d) Neither 1 nor 2
- 72. Which among the following countries is not a member of the North Atlantic Treaty Organization (NATO)?
 - Hungary (a)
 - Poland (b)
 - Belarus
 - Turkey

- 73. Which of the following statements is/are correct?
 - The 15th ASEAN-India Summit was held virtually in March 2022.
 - European Union is India's largest regional trading partner.

Select the correct answer using the code given below.

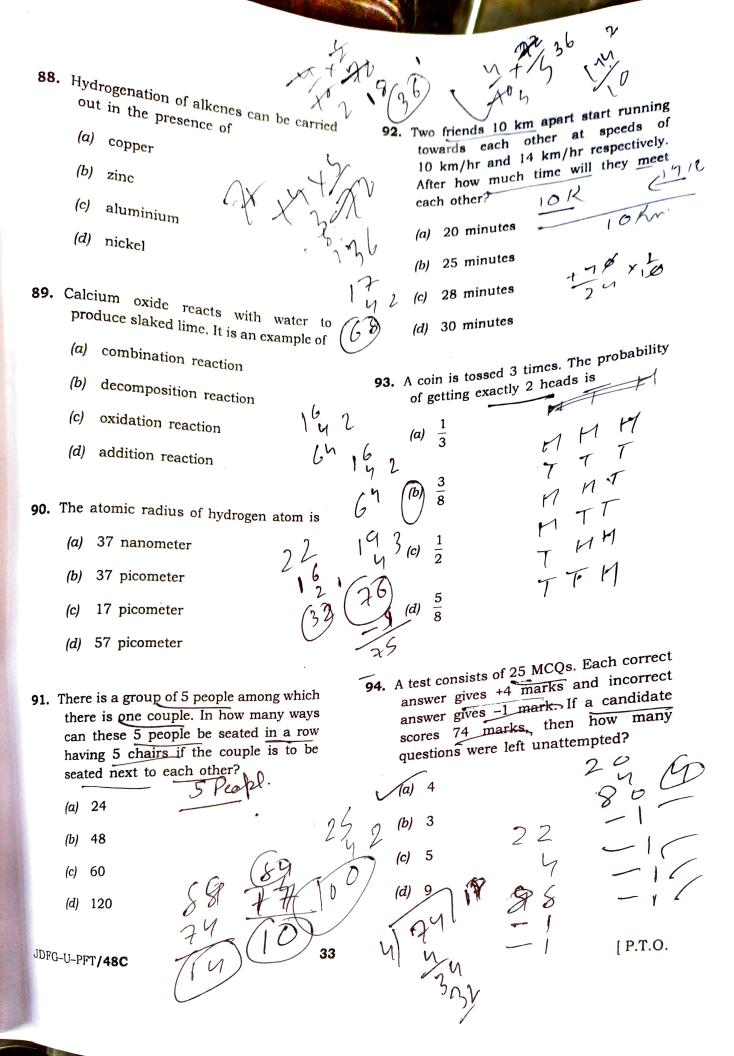


- (b) 2 only/
- Both 1 and 2 Neither 1 nor 2
- 74. What is the term of office of the National Human Rights Commission?
 - (a) 5 years or up to 70 years of age
 - (b) 3 years or up to 70 years of age
 - (c) 5 years or up to 65 years of age
 - (d) 3 years or up to 65 years of age
 - 75. Which of the following sets of nations are members of the BIMSTEC Initiative?
 - (a) Bangladesh, Bhutan, Nepal, India and Sri Lanka
 - Bangladesh, Bhutan, Nepal, India, Sri Lanka, Thailand and Myanmar
 - Bangladesh, Bhutan, Nepal, India, Sri Lanka and Maldives
 - Bangladesh, Bhutan, Nepal, India, Myanmar, Sri Lanka and Indonesia

79. Which of the following makes bread is soft and spongy when baking soda is 76. At the time of short circuit, the current in an electric circuit added? becomes zero Sodium salt of acid remains same (b) NaHCO3 increases sharply (c) CO_2 (d) decreases sharply (d) H₂O 80. The average age of father and elder son is 35 years, the average age of father 77. If the linear momentum of a moving and younger son is 32 years and the object changes by two times, then its average age of the two sons is 17 years. kinetic energy will change by a factor of What is the average age of the father (a) 2 and his two sons? 30 years (b) 4 27 years (c) 6 28 years (d) 8 29 years 78. Which one of the following oxides 81. A number is 124 more than its one-third. reacts with both acid and base? What is that number? Aluminium oxide (a) 194 (b) Calcium oxide (b) 180 Sodium oxide 189 (c) (c) (d) Potassium oxide 186 186 29 JDFG-U-PFT/48C

- 82. A car travels $\frac{3}{4}$ th of the distance at a speed of 60 km/hr and the remaining 1 th of the distance at a speed of v km/hr. If the average speed for the full journey is 50 km/hr, then the value of v is
 - 40 (a)
 - 30 (b)
 - 100/3 (c)
 - (d) 35
- 83. Suppose A and B can complete a work together in 10 days. If B alone can complete the work in 15 days, then in how many days can A alone finish A + B = 10 Bale -> 15the work?
 - 20 days
 - 24 days
 - 25 days
 - (d) 30 days
- 84. If the average of the first four of five numbers in decreasing order is 25 and the average of the last four numbers is 20, then what is the difference between the first and the last number?
 - (a) 5
 - (b) 10
 - (c) 15
 - (d) 20

- 85. Borax is prepared from
 - calcium carbonate
 - magnesium carbonate
 - potassium carbonate (c)
 - sodium carbonate (d)
- 86. Cinnabar is an ore of
 - (a) mercury
 - (b) zinc
 - copper
 - (d) lead
- 87. White gold is an alloy of
 - (a) gold, nickel and palladium
 - (b) gold, cobalt and palladium
 - gold, titanium and platinum
 - (d) gold, magnesium and palladium



g5. A person has a total of 100 coins consisting of 72 and 75 coins. If the total value of the coins is 7320, then the number of 72 coins is

- (a) 40~766
- 96. The technology known as 'Electromagnetic Air Lift System' is sometimes talked about in reference to
 - (a) launching guided missiles from silos
 - (b) Jaunching aircraft from warships
 - (c) navigation of nuclear-powered submarines
 - (d) development of reusable rockets
- 97. Consider the following statements:
 - Aluminium powder is used as a solid fuel for rocket engines.
 - Compared to liquid fuel propelled rocket engines, the thrust per amount of fuel burned is higher in solid fuel propelled rocket engines.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

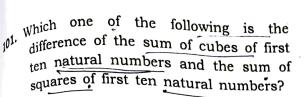
- 98. Consider the following missiles:
 - Agni-I
 - BrahMos 2.

Which of the above is/are cruise missile/missiles?

- 1 and 2 (a)
- 2 only
- 1 and 3
- 3 only
- desence, India's consider the following helicopters: **99.** With
 - Cheetah 1.
 - Chetak 2.
 - Rudra 3.

Which of the above has/have turret and system rocket gun, missile?

- 1 and 2
 - (b) 2 only
 - 1 and 3
- (d) 3 only
- 100. Recently, India gave a coastal radar system to which one of the following countries?
 - (a) Bangladesh
 - Maldives
 - Sri Lanka
 - United Arab Emirates

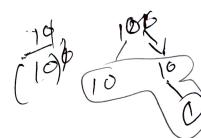






2880 (c)

(d) 2000

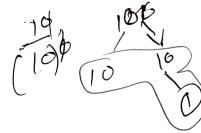


102. A person buys an item from a shop for which the shopkeeper offers a discount of 10% on the marked price. The person pays using an e-wallet which gives 10% cash back. Which one of the following is the value of effective discount?

18%

 $(c) \sim 19\%$

(d) 21%



103. A solid spherical ball made of iron is melted and two new balls are made whose diameters are in the ratio of 1:2. The ratio of the volume of the smaller new ball to the original ball is

- (a) 1:3
- (b) 1:5
- (c) 2:9
- (d) 1:9

37

104. Suppose a bank gives an interest of 10% per annum compounded annually for a fixed deposit for a period of two years. What should be the simple interest rate per annum if the maturity amount after two years is to remain the same?

10%

(a)

10.5% (b)

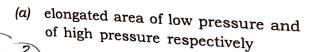
11% (c)

12% (d)

105. A runner's average speed reduces by 25% every hour. If he runs 16 km in the first hour and he runs for 3 hours, then what is his overall average speed?

- 12 km/hr (a)
- 12.33 km/hr (b)
- 10.33 km/hr (c)
- (d) 13 km/hr

106. Trough and ridge are



elongated areas of low pressure

- elongated areas of high pressure
- elongated area of high pressure and of low pressure respectively

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the boundary layer of the forest at which the energy exchange occurs and some insolation is returned directly to space is

- (a) forest floor
- (b) forest soil
- (c) forest canopy
- (d) forest litter

108. The organisms that prefer high salt concentration habitats refer to as

- (a) alkaliphiles
- (b) calcifuges
- (c) halophiles
- (d) nitrophiles

109. Which one of the following is **not** an operating system?

- (a) MS-Windows
- (b) Linux
- (c) Ubuntu
- (d) MS-Excel

110. Which one of the following protocols is **not** an application layer of the TCP/IP model?

- (a) FTP
- (b) HTTP
- (c) DNS
- (d) IP

111. Which one of the following is a semiconductor device that is used to increase the power of the incoming signals by preserving the shape of the original signal?

- (a) Register
- (b) Transistor
 - (c) Flip-flop
 - (d) Diode

112. Which of the following combinations correctly represents the genetic materials in prokaryotes and eukaryotes respectively?

- (a) Nucleoid and Chromatin
- (b) Chromatin and Nucleoid
- (c) Nucleoid and Nucleolus
- (d) Nucleolus and Chromatin

- 113. Lysosomes are sacs of the cell filled with digestive enzymes. These digestive enzymes are synthesized by
 - (a) Golgi bodies
 - (b) smooth endoplasmic reticulum
 - (c) rough endoplasmic reticulum
 - (d) lysosome itself
- 114. Which of the following best represents the cells of a meristem of plant?
 - (a) Dense cytoplasm, thin cell wall, large nuclei and absence of vacuoles
 - (b) Dense cytoplasm, thin cell wall, large nuclei and large vacuoles
 - (c) Dense cytoplasm, thin cell wall, small nuclei and absence of vacuoles
 - (d) Dense cytoplasm, thick cell wall, small nuclei and large vacuoles
 - 115. Which one of the following animals has a four-chambered heart?
 - (a) King cobra
 - (b) Turtle
 - (c) Chameleon
 - (d) Crocodile

- 116. One way of incorporating desired characters into crop varieties is hybridization. In this process, there is crossing between genetically dissimilar plants. Which one of the following crossings will not refer to hybridization?
 - (a) Intervarietal
 - (b) Interspecific
 - (c) Intergenic
 - (d) Intragenic
- 117. Depending on the requirements, plant nutrients are classified as micronutrients and macronutrients. Which one of the following is an example of a macronutrient?
 - (a) Manganese
 - (b) Copper
 - (c) Magnesium
 - (d) Chlorine
 - 118. Buds produced in the notches along the leaf margin of Bryophyllum fall on soil and develop into new plants. This is an example of which one of the following types of reproduction?
 - (a) Vegetative propagation
 - (b) Budding
 - (c) Spore formation
 - (d) Regeneration

- 119. Phloem tissues are mostly responsible for transport of
 - (a) water
 - (b) oxygen
 - (c) minerals
 - (d) food
 - 120. Two objects, x and y, have equal mass and are moving with speeds u and 3u respectively. Their kinetic energies k_x and k_y are related as
 - (a) $k_x = k_y$
 - (b) $2k_x = k_y$
 - (c) $9k_x = k_y$
 - (d) $3k_x = k_y$
 - **121.** Which one of the following is **not** the unit of pressure?
 - (a) pascal (Pa)
 - (b) N/m^2
 - (c) J/m²
 - (d) bar

- 122. Which one of the following materials cannot be used to make a convex lens?
 - (a) Aluminium
 - (b) Glass
 - (c) Sapphire
 - (d) Water
 - 123. The optical phenomenon responsible for the blue colour of sky is
 - (a) dispersion
 - (b) reflection
 - (c) refraction
 - (d) scattering
 - 124. The electrical device used for converting mechanical energy into electrical energy is called
 - (a) voltmeter
 - (b) ammeter
 - (c) motor
 - (d) generator
 - 125. The magnitude of focal length of a concave lens is 2 m. What is the power
 - (a) +0.5 dioptre
 - (b) -0.5 dioptre
 - (c) +2.0 dioptre
 - (d) -1.0 dioptre