AIIMS-2018 2nd SHIFT May 27

PART - A (PHYSICS)

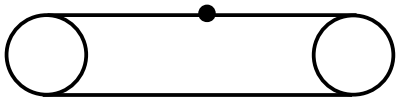
1. Deuteron and an α particle move in same radius in a uniform magnetic 'B' field. If energy of deuteron is $E_{0,}$ then find out the energy of α particle.

2. An elevator is going up with an acceleration $2m/s^2$. If radius of the wheel attached to the elevator is 0.1 m, then find out number of revolutions in t = 10 s.

3. Find out the velocity of electron in second orbit of helium.

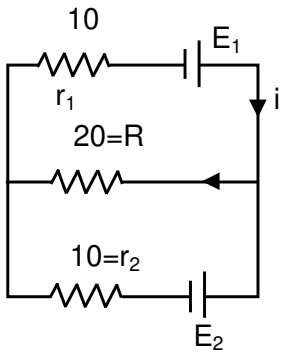
4. Which of the following is the correct graph showing V - I characteristics for an ideal PN junction diode?

5. A tractor is connects with a belt the front an the back real. If mass of the belt is 0.725 and velocity of the belt is given as 9 km/hr, when find out the kinetic energy of the belt.



6. In a YDSE experiment if position of first minima is given as Y_0, then find out the wavelength of light used if distance between slits is 'd' and screen is D.

7.



Find out the current I_2 as shown in the diagram.

8. 2 long parallel wires which are 2 m apart carry current in the opposite direction but of same magnitude 2 amp. then find out the value of magnetic field intensity at the mid point of the 2 wires and in the same plane

9. If decay constant of a radioactive sample is 0.05/year, then find out the time for which sample will decay by 75%.

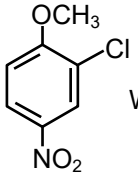
10. Two masses undergo perfectly in elastic 1 dimension collision. In which M_1 is 10 metric tonnes and moving with velocity 5 m/s collides with another stationery mass of 40 metric tonnes, then find out the loss of energy in collision

11. In a communication system the distance between 2 towers is given as 'd'. The height of the trans mission antenna is h_1, then find out the height of the receiver antenna.

12. If focal length of human eye is 2 cm, then find the focal length of contact lens. Such that a combined focus of 2.5 cm is obtained after using contact lens.

13. A closed vessel explodes at 15 atm pressure. If temperature of the vessel is 300 K at 10 atm pressure then find at what temperature will the vessel explodes.

PART - B (CHEMISTRY)

14. 

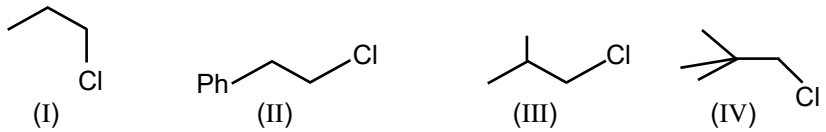
Write IUPAC name of following

(1) 2-chloro-1-methoxy-4-nitrobenzene
(2) 2-chloro-4-nitro anisole
(3) 3-chloro-4-methoxy-1-nitrobenzene
(4) 1-chloro-2-methoxy-5-nitrobenzene

15.

Write correct decreasing order of acidic strength ?

(1) I > II > III > IV
(2) I > III > IV > II
(3) IV > III > II > I
(4) IV > III > I > II

16. 

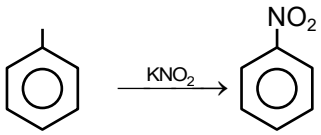
(I) (II) (III) (IV)

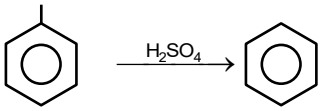
Write decreasing order of SN^2 reaction ?

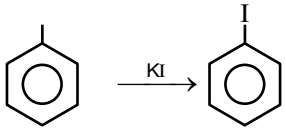
(1) I > II > III > IV
(2) II > I > III > IV
(3) IV > III > II > I
(4) IV > III > I > II

17. Which reaction give wrong product ?

(1) 

(2) 

(3) 

(4) 

18. In following cell reaction

$$Mg(s) + 2Ag^{+}(0.001M) \longrightarrow Mg^{2+}(0.20M) + 2Ag(S)$$

Calculate E_{cell} for the reaction [E^{o} = 3.17 V , $\frac{2.30\,RT}{F}$ =0.054]

(1) 2.63 V (2) 3.01 V (3) 3.33 V (4) 3.51 V

19. For first order reaction as time duration goes from 10min to 30 min rate of reaction decreases from 0.4Ms^{-1} to 0.04 Ms^{-1} . What is the half life of the reaction ?

(1) 8 min (2) 4 min (3) 6 min (4) 2 min

20. Example of Molecular solid is :

(1) $SO_2(s)$ (2) SiC (3) C (graphite) (4) NaCl

21. Sulubility of a sparingly soluble salt XB_2 in water is x. What will be its solubility in a solution of yB having concentration of 0.001M?

(1) $x^2 \times 10^{-6}$ (2) $4x^3 \times 10^6$ (3) $4x^3 \times 10^{-6}$ (4) $4x^3 \times 10^3$

22. 20 mL of 0.1 M acetic acid in mixed in a solution of NaOH. If 10 mL of 0.1 M NaOH is present in then H^+ concentration in resulting solution is (K_a of acetic acid = 1.7×10^{-5})

(1) 3.4×10^{-5} (2) 1.7×10^{-2} (3) 1.7×10^{-5} (4) 1.7×10^{-7}

23. Gas in a cylinder is maintained at 10 atm pressure and 300 K temperature. The cylinder will explode if pressure of gas beyond 15 atm. What is maximum temperature to which gas can be heated ?

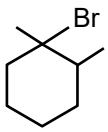
(1) 400 K (2) 500 K (3) 450 K (4) 250 L

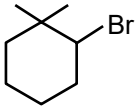
24.

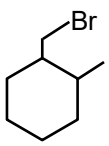
Which reagent is suitable for this conversion ?

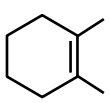
(1) Zn-Hg/HCl (2) $LiAlH_4$ (3) NH_2–NH_2/OH^- (4) Red P + HI

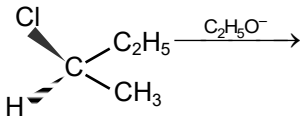
25.

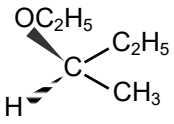
(1) 

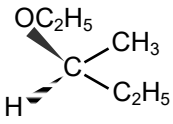
(2) 

(3) 

(4) 

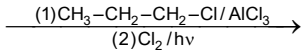
26.  What is product of following reaction ?

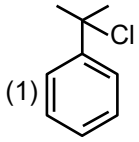
(1) 

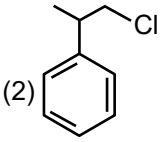
(2) 

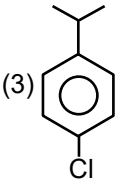
(3) $CH_3–CH=CH–CH_3$

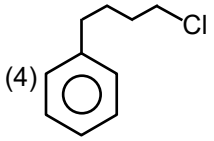
(4) $H_3C–CH_2–CH=CH_2$

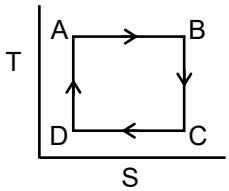
27. 

(1) 

(2) 

(3) 

(4) 

28. 

In which process volume increases

(1) AB, CD (2) AB, BC (3) CD, DA (4) BC, CD

29. Freezing point of 0.4 m solution a weak monoprotc acid is –0.1ºC. What is its vont Hoff factor i ?
(1) 1.5 (2) 1.6 (3) 1.34 (4) 1.1

30. In second orbit of H atom what is velocity of e^-
(1) 2.18×10^6m/sec (2) 3.27×10^6m/sec (3) 10.9×10^5m/sec (4) 21.8×10^6m/sec

31. When on metal sheet fall λ_1 light will eject electron with V_1 velocity and with λ_2 light eject electron of v_2 velocity, what is $v_2^2 - v_1^2$ value

(1) $\frac{2hc}{m}\left(\frac{1}{\lambda_2} - \frac{1}{\lambda_1}\right)$ (2) $\frac{hc}{m}\left(\frac{1}{\lambda_2} - \frac{1}{\lambda_1}\right)$ (3) $\frac{2hc}{m}\left(\frac{1}{\lambda_1} - \frac{1}{\lambda_2}\right)$ (4) $\frac{m}{2hc}\left(\frac{1}{\lambda_2} - \frac{1}{\lambda_1}\right)$

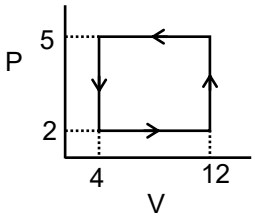
32. For N_3^- which statement is wrong
(1) Iso electronic with CO_2 (2) NH_2OH and N_3^- have same O.N. on nitrogen atom
(3) N–N bond length are same (4) HN_3 have linear shape

33. Which compound do not react in dilute HCl at high temperature.
(1) $SnSO_4$ (2) $PbSO_4$ (3) BioCl (4) $CdSO_4$

34. $C_3H_6 + H_2 \longrightarrow C_3H_8$ $\Delta H_1 = -224$
$C_3H_8 + 5O_2 \longrightarrow 3CO_2 + 4H_2O$ $\Delta H_2 = -2027$
$H_2 + O_2 \longrightarrow H_2O$ $\Delta H_3 = -282$

Calculate combustion of propene
(1) –1020 KJ (2) –2085 KJ (3) – 2020 KJ (4) None

35.



Calculate work done

(1) 12 atm × lt (2) 24 atm × lt (3) 48 atm × lt (4) 36 atm/l

36. $[Cr(CO)_6]$ + NO(excess) $\longrightarrow$ Product

(1) $[Cr(CO)_4(NO)_2]$ (2) $[Cr(NO)_4]$ (3) $[Cr(CO)_5]$ NO (4) $[Cr(CO)_2(NO)_4]$

37. Which of the following give good synergic bond with metal

(1) CO (2) NH_3 (3) H_2O (4) Cl^-

38. Which pair of diatomic species do not have same bond order ?

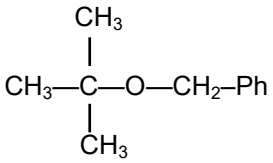
(1) , C_2 (2) O_2^{2-} , F_2^- (3) N_2^+ , O_2^- (4) B_2^{2-} , C_2

39. Which of the following statement is wrong for solvey process

(1) NH_3 is regenerated (2) $CaCl_2$ is one of the by product

(3) $CaCO_3$ is used completely in reaction (4) Na_2CO_3 is partially convert into bi carbonate

40. What are the suitable rectant for the following ether synthesis



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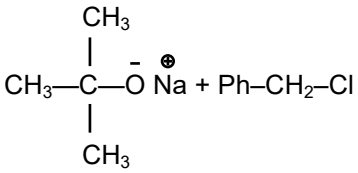

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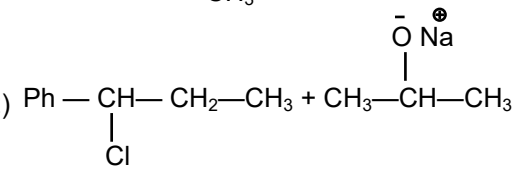

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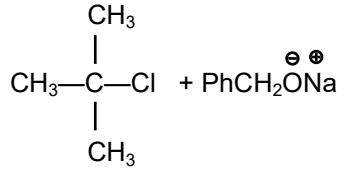

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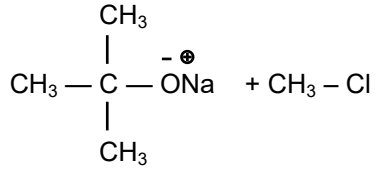

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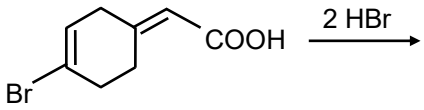
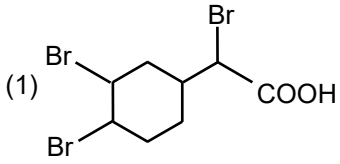
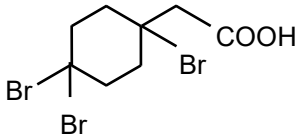
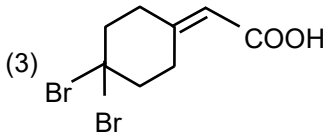
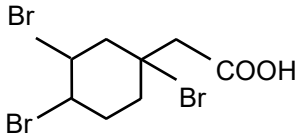


(1) 

(2) 

(3) 

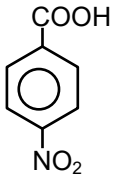
(4) 

42. At 300 K, activation energy of A is higher than B by 5.75 kJ/mol in presence of catalyst. Calculate $\frac{K_B}{K_A}$

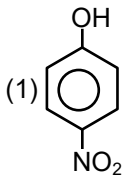
(1) 1 (2) 10 (3) 1000 (4) 100

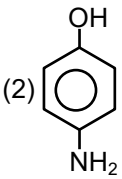
43. Water in oil (w/o), what is added as emulsifying agent :

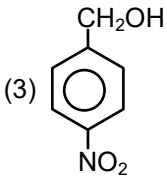
(1) soap (2) heavy metal (3) gold (4) none

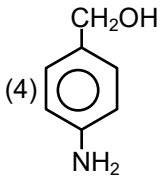
44. 

$\xrightarrow{LiAlH_4}$ Product is :

(1) 

(2) 

(3) 

(4) 

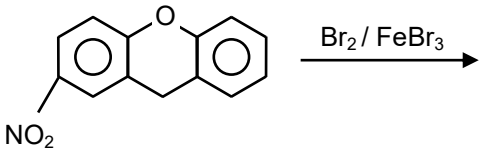
45. ClF_2^- , ClF_4^- find out number of lone pair and geometry.
(1) 3 – Linear, 2 – Square planar (2) 3 – Square planar, 2 – Linear
(3) 0 – Linear, 3 – Square planar (4) 2 – Linear, 2 – Square planar

46. Which have correct order of dipole moment :
(1) $SO_2 > H_2O$ (2) $NF_3 > NH_3$ (3) $BF_3 < NH_3$ (4) $SO_2 < SO_3$

47. What is product of reaction between $Ba(OH)_2$ dilute solution with $H_2O_2 + ClO_2$:
(1) HOCl (2) $Ba(OCl)_2$ (3) $Ba(ClO_3)_2$ (4) $Ba(ClO_2)_2$

48. $KMnO_4$ is added to KOH, which of the following colour is observed
(1) Pale pink (2) Brown (3) Black (4) Green

49.



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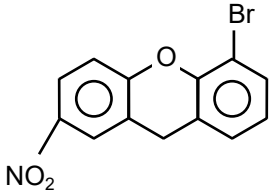

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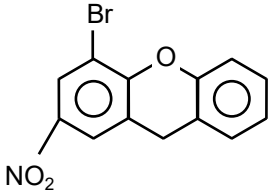

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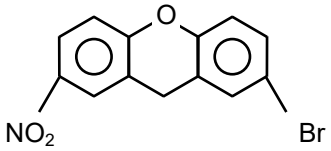

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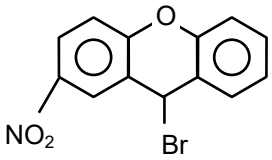


50. **Assertion :** Cis-polyisoprene is natural Rubber.
Reason : It has a linear structure thats why this is elastic in nature
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

51. **Assertion :** Oxidation of glucose by Br_2 water gives saccharic acid
Reason : Br_2 water oxidized –CHO and alcohol
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

52. **Assertion :** Metal deficiency defect can be seen in FeO
Reason : Li compound (LiCl) have violet colour due to F center.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

53. **Assertion :** Zone refining is based on solubility of impurity in liquid metal
Reason : Pure metal oxide is obtained in zone refining
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

54. **Assertion :** Pure N_2 is formed from $Ba(N_3)_2$
Reason : Mass of Barium is high
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

55. **Assertion :** Aldehyde have lower boling point than ether.
Reason : Aldehydes are less polar than ether.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

56. **Assertion :** Addition of Q and w give ΔU
Reason : addition of two path function can not give state fuction
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

57. **Assertion :** Red phosphorous on heating changes its colour into black
Reason : Black phosphorous contain P_4 units
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

58. **Assertion :** $Mg(CH_3)_2$ behave as a polymer
Reason : CH_3 can form a very good bridge bond
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

59. **Assertion :** Non competitive drugs alter the shape of active site of enzyme.
Reason : They attack on the active site of enzyme
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

60. **Assertion :** Na_2SO_3 solution give basic solution in litmus solution
Reason : It react with water and H_2SO_3 form
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

61. **Assertion :** All C—C—C bonds angles in Isobutene($CH_3—\underset{\displaystyle CH_3}{\overset{\displaystyle |}{C}}=CH_2$) are different.
Reason : CH_3 (Methyl group) show steric crowding.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

62. **Assertion :** F_2 and Cl_2 when passed through water, F_2 is more reactive.
Reason : F_2 is most electronegative.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

63. **Assertion :** Gold sol first convert into red to blue than blue to red on heating.
Reason : In gold sol extent of metallic bonding increases.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

64. **Assertion :** $[Co(NH_3)_6]^{+3}$ and $[co(en)_3]^{+3}$ are more stable complex.
Reason : They are low spin complex
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

65. **Assertion :** A non volatile solute added in solvent liquid then freezing point of mixture decreases.
Reason : Vapour pressure decrease by addition of non volatile solute, so equilibrium point where Vp of solid and VP of liquid are equal can reach at lower temp.
(1) If both assertion and reason are true and reason is the correct explanation of assertion.
(2) If both assertion and reason are true but reason is not the correct explanation of assertion.
(3) If assertion is true but reason is false.
(4) If both assertion and reason are false.

PART - C (BIOLOGY

66. Full form of GFC is :

(1) Grazing food chain
(2) Grazing fish chain
(3) Gross food chain
(4) Green forest conservation

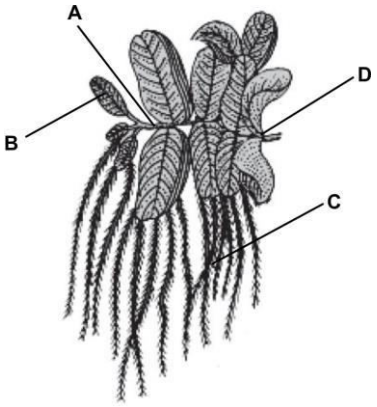
67. Biomagnification refers to :

(1) Breeding of crops that are rich in minerals and vitamins, good proteins and healthier fats for human health
(2) Increase in concentration of the toxicant at successive trophic levels.
(3) Exploring at molecular, Genetic and species level diversity for the products of economic importance
(4) Decomposition of organic waste in water by the action of microbes

68. Codons of Arginine are

(1) CGU, CGC, CGG
(2) CAC, CAG, CAU
(3) GGU, GGC, GGA
(4) CGU, CCC, CGG

69.



In above diagram, the lebelling 'C' is

(1) Leaf
(2) Internodal eongation
(3) Third leaf is modified into root
(4) Rhizoid

70. Function of smooth endoplasmic reticulum is

(1) Synthesis of lipid
(2) Synthesis of minerals
(3) Synthesis of protein
(4) None

71. Which group of hormones is natural

(1) IAA, IBA, NAA
(2) IAA, GA_3, ABA
(3) 2,4-D, Kinetin, ABA
(4) GA_3, Zeatin, NAA

72. The saturation point of CO_2 in C_4 plants is

(1) 390 μl/L
(2) 450 μl/L
(3) 460 μl/L
(4) 360 μl/L

73. The ratio of complementary gene in F_2 generation

(1) 12 : 3 : 1 (2) 9 : 7

(3) 9 : 3 : 4 (4) 9 : 6 : 1

74.

Column-I	**Column-II**
(i) + –	(A) Amensalism
(ii) + 0	(B) Parasitisim
(iii) + +	(C) Commensalism
(iv) – 0	(D) Mutualism

(1) i–B, ii–A, iii–D, iv–C (2) i–A, ii–B, iii–D, iv–C

(3) i–B, ii–A, iii–C, iv–D (4) i–B, ii–C, iii–D, iv–A

75. Match the Column-I and Column-II

Column-I	**Column-II**
(i) Auxin	(A) Adenine derivatives
(ii) Gibberellin	(B) Carotenoid derivatives
(iii) Cytokinin	(C) Terpins
(iv) ABA	(D) Indole compounds

(1) i–B, ii–A, iii–D, iv–C (2) i–D, ii–B, iii–A, iv–C

(3) i–B, ii–A, iii–C, iv–D (4) i–D, ii–C, iii–A, iv–B

76. Which of the following statement is wrong about auxin

(1) 2,4–D prevents the growth of dicot weeds

(2) 2,4–D prevents the growth of monocot weeds

(3) It promotes parthenocarpy

(4) IAA is natural auxin

77. Which of the following is false fruit

(1) Groundnut (2) Mustard, Mango

(3) Citrus (4) Apple, strawberry

78. Haemophilia is

(1) Sex linked (2) Sex limited

(3) Autosomal recessive (4) Autosomal dominant

79. Which of the following chains of haemoglobin is affected in thalassaemia

(1) Only β chain (2) Only α chain

(3) Both α and β chain (4) γ chain

80. Which of the following statement is wrong about transcription in bacteria.

(1) Splicing is not required

(2) Single RNA polymerase controls all DNA polymerases

(3) This process required more/less energy

(4) None

81. Free living N_2 fixation bacteria

(1) Anabaena, Azotobacter, Frankia
(2) Rhizobium, Azotobacter, Rhodospirillum
(3) Beijernickia, Azotobacter,Clostridium
(4) Nostoc, Frankia, Bacillus

82. In somatic hybridization of leaf and nucellus cells of pinus the ploidy level is

(1) 2n
(2) 3n
(3) 5n
(4) 4n

83. Which statement is wrong about satellite

(1) They show high digree of polymorphism
(2) They do not take part in protein synthesis
(3) They do not inherit from parents to offsprings
(4) None

84. Which statement is wrong about pollution :

(1) Leaded petrol is used in vehicle that has catalytic converter
(2) Hot water releases from thermal power plants
(3) Presence of DDT in food chain
(4) Biological control does not create pollution

85. Lichens are best indicator of –

(1) Air pollution
(2) Water pollution
(3) Soil pollution
(4) Noise pollution

86. Which enzymes will be required to obtain protoplast from plant cell?

(1) Cellulase, Pectinase
(2) Cellulase, Protease
(3) Chitinase, Pectinase
(4) Cellulase, Lipase

87. Which of the following is correct pair :

Organism		**Number of Chromosomes**
(1) Human	–	2n = 42
(2) Fruit fly	–	2n = 10
(3) Onion	–	2n = 28
(4) House Fly	–	2n = 12

88. Which among the following is true for protein synthesis in bacteria?

(1) It involves all the three types of RNAs (m-RNA, t-RNA and r-RNA)
(2) It involves 3 types of RNA polymerases
(3) It involves single type of RNA polymerase
(4) It involves RNA processing

89. Examples of essential amino acids are –

(1) Lys, Gly, Trp, Val
(2) His, Val, Lys, Trp
(3) Phe, Glu, Met, Ala
(4) Ala, Arg, Asn, Pro

90. Select the incorrect matching –

(1) Annelida - *Nereis, Hirudinaria, Lumbricus*
(2) Echinodermata - *Echinus, Cucumaria, Asterias*
(3) Reptilia - *Hemidactylus, Ophiosaurus, Chelone*
(4) Mammalia - *Betta, Rattus, Felis*

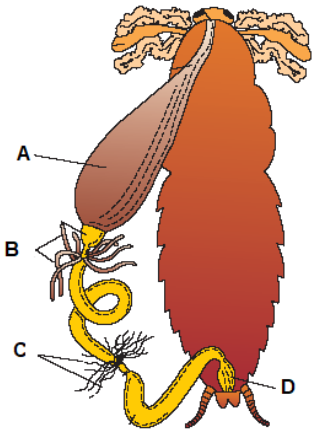
91. Which of the following condition is true at the time just after ovulation?

(1) High estrogen, low progesterone
(2) Low estrogen, low progesterone
(3) High estrogen, high progesterone
(4) Low estrogen, high progesterone

92. Which of the following explained evolution in most acceptable form?

(1) Lamarck, Darwin, Hugo de Vries
(2) Anaximander, Darwin, Malthus
(3) F. Redi, Richter, Cuvier
(4) Lamarck, Hardy Weinberg, Darwin

93. Select the option having correct matching of parts of the digestive tract of cockroach –



(1) A - Hepatic cecae, B - Crop, C - Malpighian tubules, D - Rectum
(2) A - Crop, B - Hepatic cecae, C - Malpighian tubules, D - Rectum
(3) A - Malpighian tubules, B - Crop, C - Hepatic cecae, D - Rectum
(4) A - Crop, B - Hepatic cecae, C - Malpighian tubules, D - Rectum

94. Match column-I with column-II and select the option having correct matching –

Column-I		Column-II	
A.	Streptokinase	**i.**	*Penicillium notatum*
B.	Statins	**ii.**	*Monascus purpureus*
C.	Cyclosporin-A	**iii**	*Streptococcus*
D.	Penicillin	**iv.**	*Trichoderma*

(1) A - i, B - ii, C - iii, D – iv
(2) A - iii, B - ii, C - i, D - iv
(3) A - iii, B - ii, C - iv, D - i
(4) A - iv, B - ii, C - iii, D - i

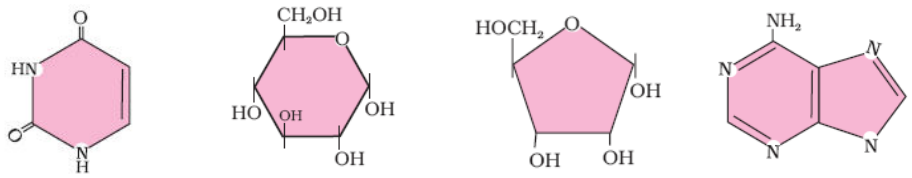
95. Select the correct option for Reptilia –
(1) 4 chambered heart - *Chelone*
(2) Tympanum represents ear - *Crocodile*
(3) External ear present - *Ophiosaurus*
(4) Dry and scaly skin - *Salamandra*

96. In smooth and cardiac muscles, cell junctions are represented by –
(1) Gap junction
(2) Desmosomes
(3) Tight junction
(4) Zonula occuludens

97. Vinblastin is obtained from –
(1) *Catharanthus roseus*
(2) *Curcuma amada*
(3) *Atropa belladona*
(4) *Syzygium cumini*

98. Select the option having correct sequence of geological periods –
Permian, Triassic, Jurassic
(1) 1 → 2→ 3
(2) 3 → 2→ 1
(3) 2 → 3→ 1
(4) 3 → 1→ 2

99. Select the option having correct matching of structure and sequence of the molecules given below –



A **B** **C** **D**

(1) A - Uracil, B - Glucose, C - Ribose, D - Adenine
(2) A - Adenine, B - Glucose, C - Uracil, D - Ribose
(3) A - Uracil, B - Ribose, C - Glucose, D - Adenine
(4) A - Adenine, B - Uracil, C - Ribose, D - Glucose

100. Select the correct one –
(1) Beer produced by distillation of fermented broth
(2) Bottled juices are cleared by protease and pectinase
(3) Methanogens digest cellulose aerobically
(4) Streptokinase is used to lower the blood cholesterol

101. Meiosis II in ovum doesn't completes until –
(1) Birth (2) Puberty
(3) Fertilization (4) Developing follicles

102. Which of the following is incorrect about DNA finger printing?
(1) It is not inherited from parents to offspring
(2) Show high degree of polymorphism
(3) It is used to detect sex during fetal development
(4) It is used in medico - legal suits

103. How is Ascariasis transmitted?
(1) By air (2) By mosquitoes
(3) By contaminated food and water (4) By infected needles

104. Which one is the reason for fast conduction of impulse in heart muscles?
(1) Presence of intercalated discs (2) SA node
(3) AV node (4) Purkinje fibers

105. Creatinine is formed by –
(1) Urea
(2) Uric acid
(3) Breakdown of creatine phosphate in muscle
(4) Kidney

106. Which among the following is predominant epithelia in digestive tract?
(1) Stratified squamous epithelia (2) Simple cuboidal epithelia
(3) Simple squamous epithelia (4) Pseudostratified ciliated epithelia

107. Pancreatic amylase acts on –
(1) Starch (2) Protein (3) Lipid (4) Disaccharide

108. Type-1 diabetes is -
(1) Insulin independent (2) Insulin dependent
(3) Caused by UV-radiation (4) Infectious

109. Thrombin is used –
(1) To convert fibrinogen into fibrin
(2) To convert angiotensinogen to angiotensin-I
(3) To dissolve clots inside the blood vessels
(4) In clearing of packed fruit juices

110. **Assertion :** Oxalo-acetic acid is first stable compound of C_4 plants

Reason : It takes place in mesophyll cell in the presence of RuBisCo

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

111. **Assertion :** In active transport, movement of substance takes place from lower to higher concentration

Reason: Transpiration is natural process

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

112. **Assertion :** IR–8 variety of rice developed in international rice research institute(IRRI) in Phillipines

Reason : Jaya & Ratna developed in international rice research institute(IRRI)

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

113. **Assertion :** Algin is obtained from Algae

Reason : Rust of wheat is due to Puccinia

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

114. **Assertion :** Groundnut & pea are non endospermic

Reason : They do not synthesis endosperm

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

115. **Assertion :** Genes show mutation, they are rare, stable and inheritable.

Reason : One allele is modified into other allele by mutation.

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A

(3) A is true but R is false

(4) A and R are false

116. **Assertion :** All enzymes can be inhibited.

Reason : Enzyme activity can be inhibited by temperature.

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A.

(3) A is true but R is false.

(4) A and R are false.

117. **Assertion :** Human has diphyodont dentition.

Reason : Human has four types of teeth – incisor, canine, premolars and molars.

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A.

(3) A is true but R is false.

(4) A and R are false.

118. **Assertion :** Many bony fishes are ammonotelic.

Reason : Ammonia is highly soluble in water

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A.

(3) A is true but R is false.

(4) A and R are false.

119. **Assertion :** In females, parturition occurs after the pregnancy.

Reason : Signal for parturition originates from fully developed embryo.

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A.

(3) A is true but R is false.

(4) A and R are false.

120. **Assertion :** Cu T is a intrauterine device.

Reason : It decreases sperm motility.

(1) Both A and R are true and R is the correct explanation of A.

(2) Both A and R are true but R is not correct explanation of A.

(3) A is true but R is false.

(4) A and R are false.

121. **Assertion :** AIDS occurs by retroviruses whose RNA is enveloped.
Reason : It enters into the cell & forms new viruses.
(1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is not correct explanation of A.
(3) A is true but R is false.
(4) A and R are false.

122. **Assertion :**Bt cotton is resistant to insects.
Reason : Butterfly feeding on Bt cotton will die
(1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is not correct explanation of A.
(3) A is true but R is false.
(4) A and R are false.

123. **Assertion :** Non-competitive inhibitor binds to active site of enzyme.
Reason : Competitive inhibitor binds to the active site and change its structure.
(1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is not correct explanation of A.
(3) A is true but R is false.
(4) A and R are false.

124. **Assertion :** *Agrobacterium tumifaciens* cause crown gall disease in dicots.
Reason : Ti plasmid infects dicot plants.
(1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is not correct explanation of A.
(3) A is true but R is false.
(4) A and R are false.

125. **Assertion :** Baculovirus are used as biocontrol agent
Reason : Baculovirus are used in ecologically vulnerable areas
(1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is not correct explanation of A
(3) A is true but R is false
(4) A and R are false

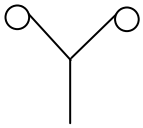
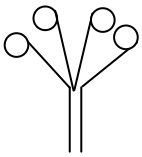
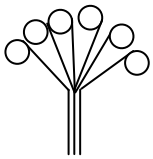
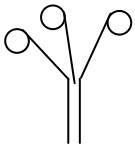
PART - D (GK + MENTAL ABILITY)

126. Where is the head office of EMS Speed Post ?
(1) New Delhi (2) Canberra (3) London (4) Paris

127. Where is the Headquarter of United Nations ?

128. What is the name of the yacht on which Six women naval officers completed their journey around the world?

129. Find the Odd One Out.
(1) (2)  (3)  (4) 

130. Find the Odd One Out.
(1)  (2)  (3)  (4) 

131. Put these cities in a proper sequencing
Srinagar .....Bangalore .....Mumbai .....Bhopal .....Delhi

132. What is the full form of PIN in postal system ?

133. Establish the relation…

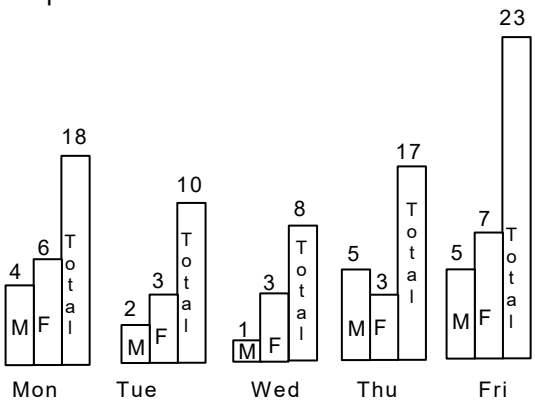
USA

?

134. Advertisers are charged more money for their ads by the Channels during IPL.
1. More viewers watch the TV during IPL
2. Advertisers are ready to pay more money during IPL
(1) Only 1 (2) Only 2 (3) 1 and 2 both (4) Both are not correct

135. There are 5 friends in a group. One more friend joins them & the average weight of the group increases. Find the weight of the 6th friend?
1. 6th friend increases the average weight by 20%.
2. Total weight of 5 friends is 250 Kg.
(1) Only 1 is required (2) Only 2 is required
(3) 1 and 2 both required (4) Can't be determined.

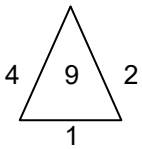
136. Male, Female, Transgender and children visit a hospital on a daily basis. Transgender number are constant on each day. See the graph below & find the day on which the maximum children visited the hospital?

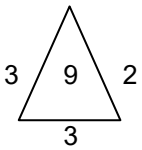


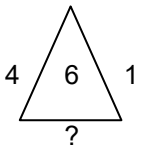
(1) Monday (2) Tuesday (3) Friday (4) Saturday

137. The Price of 2 Tables is equal to price of 5 chairs. If a person purchases 10 Chairs & 10 Tables in Rs. 7000/- then find out the price of 2 chairs & 4 tables.

139.

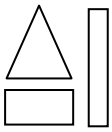


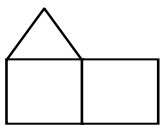


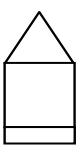


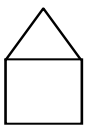
(1) 2 (2) 4 (3) 3 (4) 5

140.



(1) 

(2) 

(3) 

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