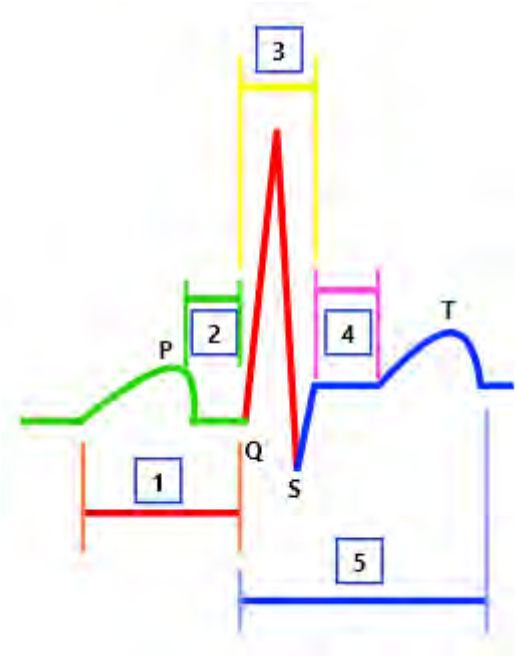
Previous Paper Questions

1. Q.Id: 196491

Recognize the figure and find out correct matching?



A) 1-PR Segment 2-PR Interval, 3-QRS Complex 4-ST- Segment 5-QT Interval

B) 1- PR Interval,2-PR Segment 3-QRS Complex , 4-QT- Interval ,5-ST Segment

C) 1- PR Segment. 2- PR Interval ,3-QRS Complex ,4.-QT Interval ,5-ST Segment

D) 1 - PR Interval ,2-PR Segment. 3-QRS Complex ,4- ST Segment,5.-QT Interval,

2. Q.Id: 196490

assertion (A): Chemotherapy and immuno therapy are used to destroy cancer cells that might have moved to parts of body

Reason (R): Chemotherapy has side effects such as loss of hair due to destruction of hair follicle cells

A) Both A and R are correct and R is the correct explanation of A

B) Both A and R are correct and R is not the correct explanation of A

C) A is correct but R is wrong

D) A is wrong but R is correct

3. Q.Id: 196489

Match the following

List-I	List-II	List-III
a) Duchenne muscular dystrophy	i) X-linked recessive	p) Mosaic appearance of skin
b) Hypertrichosis	ii) Sex limited	q) Expression is limited to only one sex
c) Incontinentia Pigmenti	iii) X-linked recessive	r) Progressive weakening of muscles
d) Secretion of milk	iv) Holandric	s) Excessive growth of hair on the pinna

A) (a - iii - r), (b - iv - s),(a - i - p),(a - ii - q)

B) (a - i - r), (b - ii - s),(a - iii - p),(a - iv - q)

C) (a - i - r), (b - iv - s),(a - iii - p),(a - ii - q)

D) (a - i - p), (b - ii - q),(a - iii - r),(a - iv - s)

4. Q.Id: 196488

Assertion (A): Pedigree analysis helps to work out the possible genotypes from the knowledgeof the respective phenotypes. Reason (R): Pedigree is a chart showing record of inheritance of certain traits over two or more ancestral generations of a person.

A) Both A and R are correct and R is the correct explanation of A

B) Both A and R are correct and R is not the correct explanation of A

C) A is correct but R is wrong

D) A is wrong but R is correct

5. Q.Id: 196487

in man, which the following and phenotypes be the correct result of aneuploidy chromosomes?

A) 22 pairs + Y females

B) 22 pairs + XXXYfemales

C) 22 pairs + XXY males

D) 22 pairs + XXfemales

6. Q.Id: 196486

Assertion (A): During the formation of placenta some layers of uterus are eroded and during parturition extensive hemorrhage occurs

Reason (R): Placenta of man is described as haemo endothelial placenta

A) Both A and R are correct and R is the correct explanation of A

B) Both A and R pre correct and R is not the correct explanation of A

C) A is correct but R is wrong

D) A is wrong but R is correct

7. Q.Id: 196485

Assertion (A): Amriocentesis is used to detect the chromosomal defects if any, in the developing foetus.

Reason (R): Amniocentesis is a cytological study of the foetal cells for abnormal chromosomes

A) Both A and R are correct and R is the correct explanation of A

B) Both A and R are correct and R is not the correct explanation of A

C) A is correct but R is wrong

D) A is wrong but R is correct

8. Q.Id: 196484

Seminal plasma in human is rich in _____

A) Fructose, calcium and certain enzymes

B) Fructose and calcium

C) Glucose and enzymes

D) No calcium. no fructose, only glucose

9. Q.Id: 196483

Match the following about lymphocytes of mammals and select the correct option?

Character	B Cells	T Cells
i) Mature in	a) Produces antibodies	p) Cytotoxic T cells
ii) Free antigens	b) Plasma cells	q) Cannot produce antibodies
iii) Effector cells	c) Bone marrow	r) Cannot recognize
iv) Antibodies	d) Can recognize	s) Thymus

A) (i - b - p), (ii - d - r),(iii - c - s),(iv - a - q)

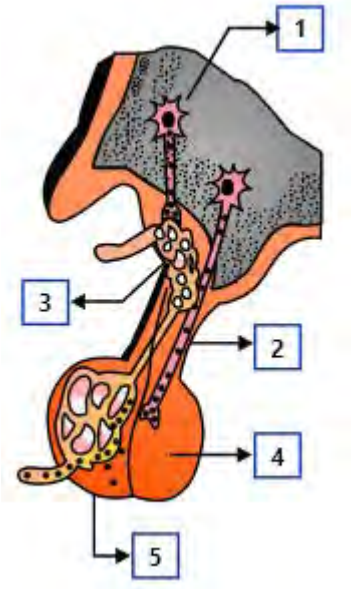
B) (i - c - s), (ii - d - r),(iii - b - p),(iv - a - q)

C) (i - b - p), (ii - a - q),(iii - c - s),(iv - d - r)

D) (i - c - s), (ii - a - q),(iii - d - r),(iv - b - p)

10. Q.Id: 196482

Pituitary gland and Hypothalamus are shown in the figure with labels 1 to 5. Identify them correctly?.



A) 1-Infundibulun. 2-Hypothalamus. 3-Portal Circulation, 4-Posterior Pituitary, 5-Anterior Pituitary

B) 1-Hypothalamus,2-Infundibulun,3-Portal Circulation, 4-Anterior Pituitary ,5-Posterior Pituitary,

C) 1-Hypothalamus,2-Infundibulun,3-Portal Circulation, 4 ,Posterior Pituitary,-5-Anterior Pituitary ,

D) 1- Infundibulun-2.Hypothalamus,,3-Portal, Circulation, 4-Anterior Pituitary ,5-Posterior Pituitary

11. Q.Id: 196481

When 'A' stands for Axon. 'D' for Dendrites, 'S' for Synapse and 'CB' for Cell body, a typical sequence of structures between a receptor and an efferent is

A) D → A → S → CB → D → A → CB

B) D → CB → AS → A → CB → D

C) D → CB → A → S → D → CB → A

D) AD → CB → S → A → D → CB

12. Q.Id: 196480

Women in their post menopause are likely to suffer from

A) Arthritis

B) Osteoporosis

C) Gout

D) Myasthenia gravis

13. Q.Id: 196479

To maintain a concentration gradient in the medullary interstitium, NaCl _____

A) Passes out of the descending limb of Henle's loop and enter the blood of the descending limb of vasarecta

B) Passes out of the descending limb of Henle's loop and enter the blood of the ascending limb of vasarecta

C) Passes out of the ascending limb of Henle's loop and enter the blood of the ascending limb of vasarecta

D) Passes out of the ascending limb of Henle's loop and enter the blood of the descending limb of vasarecta

14. Q.Id: 196478

The condition in which Kidneys fail to conserve water leading to water loss and deliydration due to impaired ADH synthesis or release is

A) Diabetes mellitus

B) Glycosuria

C) Ketonuria

D) Diabetes insipidus

15. Q.Id: 196477

In a healthy adult man, the smallest type of leucocytes are _____

A) Lymphocytes

B) Monocytes

C) Basophils

D) Eosinophils

16. Q.Id: 196475

Match the following

List1	List2
A. PO_2 of alveoli lungs	I. 40 mm Hg
B. PO_2 of atmospheric air	II. 95 mm Hg
C. PO_2 of deoxygenated blood	III. 104 mm Hg
D. PO_2 of oxygenated blood	IV. 159 mm Hg

A) (A-II),(B-IV),(C-I).(D-III)

B) (A-III),(B-II),(C-I).(D-IV)

C) (A-III),(B-IV),(C-I).(D-II)

D) (A-II),(B-IV),(C-III).(D-I)

17. Q.Id: 196474

Choose the correct statements related to ecological pyramids?

(i) The trophic relationship is expressed in terms of numbers, biomass or energy arranged one on the top of its lower trophic level, resulting in a pyramid shape

(ii) The base of each pyramid represents producers, while the apex represents the top order consumers

(iii) The pyramid of biomass in sea is generally upright

(iv) in the case of parasite food chain, the pyramid of number is inverted

(v) Some species belonging to two or more trophic levels is not limitation of ecological pyramid

A) Except (iii) and (v). all are correct

B) Except (ii) and (iii). all are correct

C) Except (iii) all are correct

D) Except (ii) and (v). all are correct

18. Q.Id: 196473

Eutrophication is the natural aging of lake by

A) Nutrient enrichment

B) Sewage enrichment

C) Physical enrichment

D) Fertilizers enrichment

19. Q.Id: 196472

Which of the following statements are correct related to fresh water ecosystem? The correct statements are_____

(i) Pond is an ideal example to understand the fundamentals of aquatic ecosystem

(ii) In deep lakes, light can penetrate more than 200 m in depth

(iii) in Deep water lakes contain three distinct zones namely Littoral zone, Limnetic zone, Profundal zone

(iv) Littoral zone is the shallow part of the lake closer to the shore

(v) Limnetic zone is the open water zone away from the shore

(vi) The rate of photosynthesis is equal to the rate of respiration in littoral zone.

A) (i) (ii), (iv) and (v) are correct

B) (ii) (iii), (iv) and (v) are correct

C) (iii), (iv) and (v) are correct

D) (iv) , (v) and(vi) are correct

20. Q.Id: 196471

Autoecology refers to ____

A) Ecological study of individual species

B) Animal ecology

C) Plant ecology

D) Population study

21. Q.Id: 196470

Which of the following factors has a negative effected on to the population growth rate_____

A) Natality

B) Emigration

C) Immigration

D) Mortality

22. Q.Id: 196469

The tropic relationship is expressed in terms of number biomass or energy arranged one on the top of lower tropic level resulting in a pyramidal In case of a parasitic food chain the pyramid number is _____

A) Always upright

B) Inverted

C) Neither upright nor inverted

D) Either upright or inverted

23. Q.Id: 196468

Anus in cockroach occurs on _____

A) 9^{th} sternum

B) 10^{th} sternum

C) Dorsal surface of 10^{th} tergum

D) Ventral surface of 10^{th} tergum

24. Q.Id: 196467

What external changes are visible after the last moult of a cockroach nymph_____

A) Labium develops

B) Anal cerci develop

C) Both fore wings and hind wings develop

D) Hind wings develop

25. Q.Id: 196465

Match the following related to drugs

Drug	Source	Effect
a)Morphine	i) Acetylation of Morphine	p) On central nervous system
b) Cocaine	ii) Cannabis	q) Depressant
c) Cannabinoids	iii) Erythtoxylum coca	r) Sedative & pain killer
d) Heroin	iv) Unriped seed capsule of poppy	s) On cardiovascular system

A) (a - iv - q), (b - iii - s), (c - ii - p), (d - i - r)

B) (a - iv - r), (b - iii - p), (c - ii - s), (d - i - q)

C) (a - i - q), (b - ii - q), (c - iii - r), (d - iv - s)

D) (a - i - r), (b - iii - s), (c - ii - p), (d - iv - q)

26. Q.Id: 196463

Identify the correct sequence of stages in the Ross cycle of plasmodium

a) Sporocyst

b) Ookinete

c) Sporozoite

d) Zygote

e) Oocyst

A) d → e → b → a → c

B) c → d → b → a → e

C) d → b → e → a → c

D) c → d → b → e → a

27. Q.Id: 196456

Pulse - Polio programme is organized in our country

A) Spread polio

B) Cure polio

C) Eradicate polio

D) Reduce polio

28. Q.Id: 196454

All protozoans are / have _____

A) Pseuodopodia

B) Contractile vacuole

C) Holozoic nutrition

D) Eukaryotic organization

29. Q.Id: 196451

Identify the components of neuromotor system in sequence?

(i) Kineto desmata

(ii) Kinety

(iii) Kinetosome

(iv) Infraciliary system

(v) Kineto desmal fibrils

(vi) Motorium

A) (iii) → (v) → (ii) → (iv) → (i) → (vi)

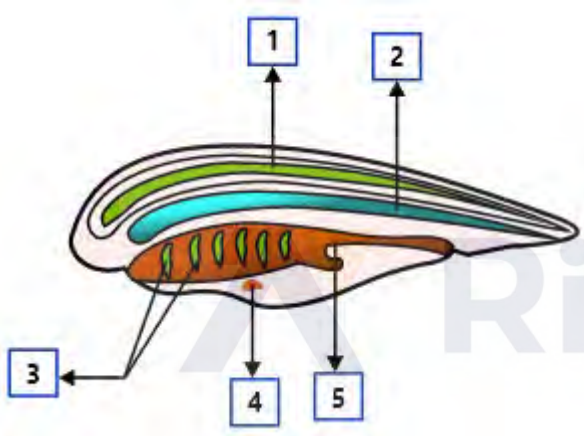
B) (ii) → (iii) → (i) → (iv) → (v) → (vi)

C) (iii) → (i) → (v) → (ii) → (iv) → (vi)

D) (iii) → (v) → (i) → (ii) → (iv) → (vi)

30. Q.Id: 196449

In the given diagram of the typical chordate. Identify the parts labelled as 1,2,3,4,5 and select the correct option?



A) 1- Notochord, 2- Nerve cord. 3 Gil slits,4- Heart, 5- Gut

B) 1- Notochord, 2- Nerve cord.3- Heart,4 Gil slits,5- Gut

C) 1- Nerve cord. 2- Notochord ,3 Gil slits 4- Heart, 5- Gut

D) 1- Nerve cord. 2- Notochord ,3- Gut,4 Gil slits 5- Heart,

31. Q.Id: 196448

Urinary bladder is absent in_____

A) Aves

B) Amphibians

C) Mammals

D) Lizards

32. Q.Id: 196447

The protochordate that doesn't have heart, blood corpuscles but performs respiratory pigment, though the external body surface is _____

A) Oikopleura

B) Doliolum

C) Branchiostoma

D) Pyrosoma

33. Q.Id: 196446

Which is not a member of Echinodermata?

A) Sea Lily

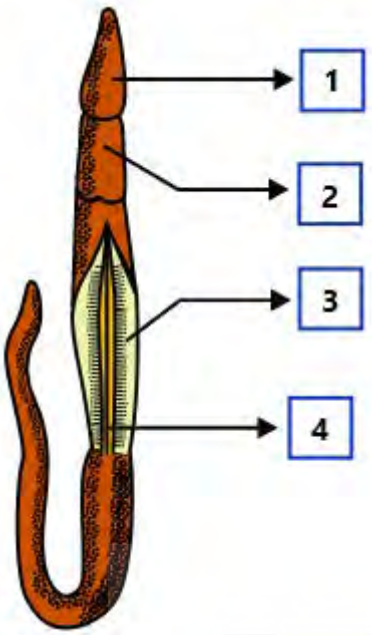
B) Star Fish

C) Ascaris

D) Ophiuthrix

34. Q.Id: 196445

Label the parts corresponding to the numbers in the diagram given below?



A) 1- Collar,2 - Gill Slits.3- Proboscis,4-Trunk

B) 1-Proboscis,2- Collar,3-Trunk ,4 - Gill Slits,

C) 1-Proboscis,2-Trunk ,3 - Gill Slits,4- Collar,

D) 1-Proboscis, 2 - Gill Slits,3- Collar, 4-Trunk

35. Q.Id: 196444

Correctly matched set of phylum, class and example is _____

A) Protozoa-Mastigophora - Entamoeba

B) Mollusca - Pelecypoda - Pinctada

C) Arthropoda - Diplopoda - Scolopendra

D) Chordata-Cyclostomata - Pyrosoma

36. Q.Id: 196443

Identify the correct option from the following statements?

i) Albumin is the smallest and the most abundant serum protein which is responsible forcolloidal osmotic pressure

ii) Blood is red colored, translucent and slightly acidic fluid

iii) Plasma constitutes 45% of human blood

iv) Gamma globules are the antibodies, also called immunoglobulins

v) Fall in the level of albumin in blood plasma results in oedema

A) (iii) and (v) are correct but (ii) and (iv) are wrong

B) (i), (iii) and (iv) are correct but (ii) and (v) are wrong

C) (i) and (iv) and (v) are correct but (ii) and (iii) are wrong

D) (i), (iii), (iv) (v) are correct but only (ii) is wrong

37. Q.Id: 196442

Deuterostomia embryonic blastopore produces_____

A) Anus

B) Mouth

C) Gonopore

D) Coccyx

38. Q.Id: 196441

ICZN is _____

A) International centre of Zoological Nomenclature

B) International code of Zygote Nomenclature

C) International code of Zoological Nomenclature

D) International centre of Zygote Nomenclature

39. Q.Id: 196440

If the student wants to study the development of zygote, internal structure and function of various pairs to assign the organism to a particular phylum, the student takes the help of following branches?

A) Developmental Biology. Anatomy, Physiology and Taxonomy

B) Embryology. External Morphology. Physiology and Taxonomy

C) Embryology. Anatomy. Osteology and Physiology

D) Embryology. Histology, Physiology and Taxonomy

40. Q.Id: 196416

Match the following?

List1	List2
A. Aspergillus Niger	I. Ethanol
B. Acetobacter	II. Butyric acid
C. Saccharomyces	III. Acetic acid
D. Lactobacillus	IV. Citric acid
E. -	V. Lactic acid

A) A-II;B-III;C-V;D-IV **B)** A-IV;B-III;C-I;D-V

C) A-I;B-II;C-IV;D-III **D)** A-III;B-V;C-II;D-I

41. Q.Id: 196412

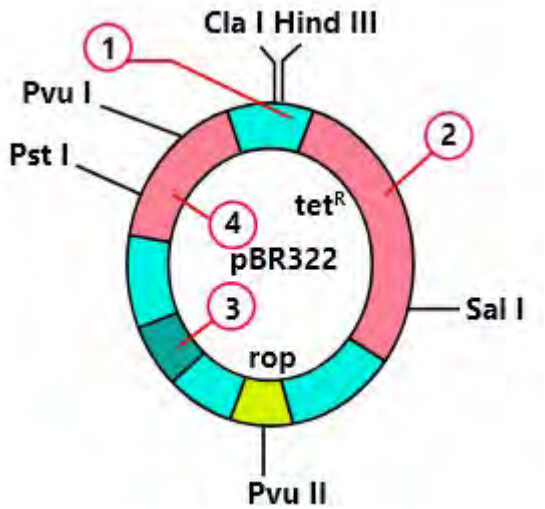
The entire collection of plants having diverse alleles for all genes.....

A) Gene pool **B)** Germplasm collection

C) Pure lines hybrids **D)** Cultivator crop

42. Q.Id: 196410

The given figure is the diagrammatic representation of the E. Coli vector pBR322. Which one of the given options correctly identifies its certain components?

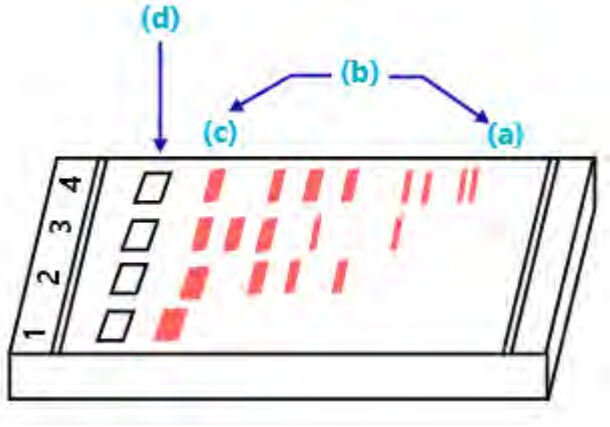


A) 1 – EcoR1,2 – BamH1,3 – Ori, 4 – amp^R **B)** 1 – amp^R,2 – Ori,3 – Bam H1,4 – Eco R1

C) 1 – Ori,2 – Bam H1,3 – EcoR1,4 – amp^R **D)** 1 – Bam H1,2 – EcoR1,3 – amp^R,4 – Ori

43. Q.Id: 196408

Identify the labeled parts 1,2,3,4 in the given figure?



A) (a)- Largest, (b)-Smallest, (c)-DNA Bands, (d)-Wells

B) (a)-DNA Bands, (b)-Largest, (c)-Wells, (d)-Smallest

C) (a) -Wells, (b)-Smallest,(c) -Largest, (d)-DNA Bands

D) (a)- Smallest, (b)-DNA Bands, (c)-Largest, (d)-Wells

44. Q.Id: 196406

r-DNA inserted with in coding sequence results in the process.....

A) Gene activation

B) Chimeric DNA

C) Recognition sequence

D) Insertional inactivation

45. Q.Id: 196404

Match the following?

List1	List2
A. George Gamow	I. Synthesis of RNA
B. Har Gobind Khorana	II. Polynucleotide Phosphorylase
C. Marshall Nirenberg	III. Code is made up of 3 nucleotides
D. Severo Ochoa	IV. Cell free system for protein synthesis

A) A-I,B-III,C-II;D-IV

B) A-II;B-IV;C-III;D-I

C) A-III;B-I;C-IV;D-II

D) A-IV;B-II;C-I;D-III

46. Q.Id: 196396

RNA polymerase III transcribes 3 of the following except.....

A) t RNA

B) 5sr RNA

C) hn RNA

D) Sn RNA

47. Q.Id: 196395

Assertion (A): The proportion of parental gene combinations was much lighter than non-parental type

Reason (R): Gene combination is due to linkage of the two genes

A) A is correct but R is wrong

B) A is wrong but R is correct

C) Both A and R are correct and R is not correct explanation for A

D) Both A and R are correct and R is the correct explanation for A

48. Q.Id: 196391

Viroid's differ from viruses in.....

A) Satellite RNA packaged with viral genome

B) Naked DNA molecules

C) Naked RNA molecules only

D) Naked DNA packaged with viral genome

49. Q.Id: 196389

T.O.Diener (1971) discovered a new infectious agent that was smaller than viruses. Consider the following statements about this infectious agent.

(i) It causes potato spindle tuber disease

(ii) These are infections RNA particles

(iii) It lacks the protein coat

(iv) The molecular weight of its RNA is low

The above statements are assigned to .....

A) Viruses

B) Viroids

C) Prions

D) Lichens

50. Q.Id: 196387

Match the following?

Column –I	Column –II	Column –III
(a) Joseph Priestly	(i) Glucose production	(p) Photosynthesis
(b) Julius Von Sachs	(ii) Role of sun light	(q) Plants restore air
(c) Jan Ingenhousz	(iii) Role of air	(r) Green parts of plants
(d) T.W. Englemam	(iv) Action of spectrum	(s) Release of O_2

A) (a–i–s),(b–iv–q),(c–iii–r),(d–ii–p)

B) (a–iv–r),(b–iii–s),(c–ii–p),(d–i–q)

C) (a–ii–p),(b–i–q),(c–iv–r),(d–iii–s)

D) (a–iii–q),(b–i–r),(c–ii–s),(d–iv–p)

51. Q.Id: 196384

Which of the following is incorrectly matched?

A) Explant → Excised plant part used for callus formation

B) Cytokinin → Root initiation in callus

C) Somatic embryo → Embryo produced from a vegetative cell

D) Anther culture → Haploid plants

52. Q.Id: 196381

Match the following?

Column –I	Column –II	Column –III
(a) Francis Darwin	(i) Coconut milk	(p) Auxin
(b) F.W. Went	(ii) Rice seedling	(q) Phototropism
(c) E. Kurosawa	(iii) Coleoptiles of canary grass	(r) Kinetin
(d) F. Skoog	(iv) Oats seedlings	(s) GIbberellic acid

A) (a–iii–q),(b–iv–p),(c–ii–s),(d–i–r)

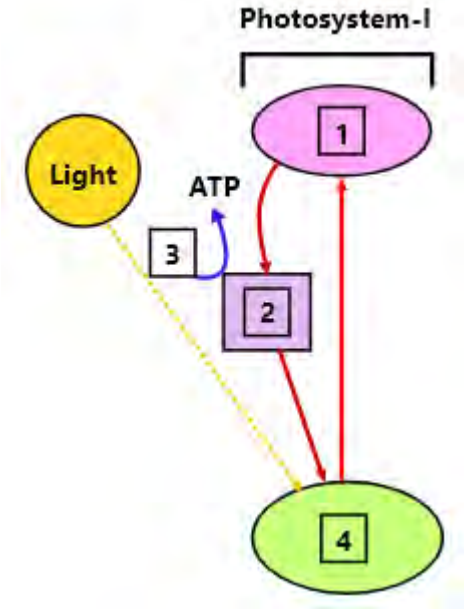
B) (a–iv–p),(b–iii–r),(c–i–q),(d–ii–s)

C) (a–ii–s),(b–i–q),(c–iii–p),(d–iv–r)

D) (a–i–r),(b–ii–s),(c–iv–p),(d–iii–q)

53. Q.Id: 196368

Identify the labeled parts as 1,2,3,4 in cyclic photophosphorylation?



A) 1-(ETS),2-(e^-acceptor),3-(P-700),4-(ADP+ip)

B) 1-(P-700),2-(ADP+ip),3-(ETS),4-(e^-acceptor)

C) 1-(e^-acceptor),2-(ETS),3-(ADP+ip),4-(P-700)

D) 1-(ADP+ip),2-(P-700),3-(e^- acceptor),4-(ETS)

54. Q.Id: 196360

Three major ways in which different cells handle pyruvic acid are as follows, except.....

A) Lactic acid fermentation

B) Photorespiration

C) aerobic respiration

D) Alcoholic fermentation

55. Q.Id: 196356

Identify the correct sequence of stages of Calvin cycle?

A) Reduction → Carboxylation → Regeneration

B) Carboxylation → Regeneration → Reduction

C) Carboxylation → Reduction → Regeneration

D) Reduction → Regeneration → Carboxylation

56. Q.Id: 196353

A competitive inhibitor of succinic dehydrogenase is _____

A) Malonate

B) Malate

C) Pyruvate

D) α – keto glutarate

57. Q.Id: 196351

Select the mismatched pair?

A) Ephemeral - Opuntia

B) Succulent - Asparagus

C) Non-Succulent - Casuarina

D) Halophyte - Rhizophora

58. Q.Id: 196348

Assertion (A): A primary succession is more common than secondary succession

Reason (R): Biogeochemical cycling is absent in secondary succession

A) Both A and R are correct R is the correct explanation for A

B) Both A and R are correct and R is not correct explanation for A

C) A is correct but R is wrong

D) Both A and R are not correct

59. Q.Id: 196343

Select the correct combination?

(i) Fruit wall of nuts

(ii) Pulp of fruit like guava and pear

(iii) Seed coat of legumes

(iv) Micropyle of pea

A) All except (i)

B) All except (ii)

C) All except (iii)

D) All except (iv)

60. Q.Id: 196340

Which of the following statement is correct?

A) The collenchyma occurs in layers below the epidermis in monocoty ledonous plants

B) Sclerenchyma cells are usually dead and without protoplasts

C) Xylem parenchyma cells are living and walled and their cell walls are made up of lignin

D) The companion cells are specialized sclerenchymatous cells

61. Q.Id: 196333

Match the following?

Vascular bundles	Arrangement	Plants
(a) Open	(i) Different radial	(p) Leaves
(b) Closed	(ii) Same radial	(q) Dicots
(c) Redial	(iii) Cambium present	(r) Monocots
(d) Conjoint	(iv) Cambium absent	(s) Root

A) (a−iv−p),(b−ii−r),(c−iii−q),(d−i−s)

B) (a−iv−q),(b−iv−r),(c−i−s),(d−ii−p)

C) (a−i−p),(b−ii−q),(c−iii−r),(d−iv−s)

D) (a−ii−r),(b−i−p),(c−iv−s),(d−iii−q)

62. Q.Id: 196327

Phloem parenchyma is absent in .....

A) Dicot stem

B) Dicot leaf

C) Monocot stem

D) Dicot root

63. Q.Id: 196325

Assertion (A): Mitosis is often called indirect division

Reason (R): Mitosis divides a parent cell into two daughter cells

A) Both A and R are correct and R is the correct explanation for A

B) Both A and R are correct and R is not correct explanation for A

C) A is correct but R is wrong

D) A is wrong but R is correct

64. Q.Id: 196321

Peptide synthesis inside a cell takes place in .....

A) Chloroplast

B) Mitochondria

C) Chromoplast

D) Ribosomes

65. Q.Id: 196319

Below features indicates which phase of mitosis?

(i) Chromosomes cluster at opposite spindle poles and their identify is lost as discrete elements

(ii) Nuclear envelop assembles around the chromosome clusters

(iii) Nucleolus, Golgi complex and ER reform

A) Anaphase

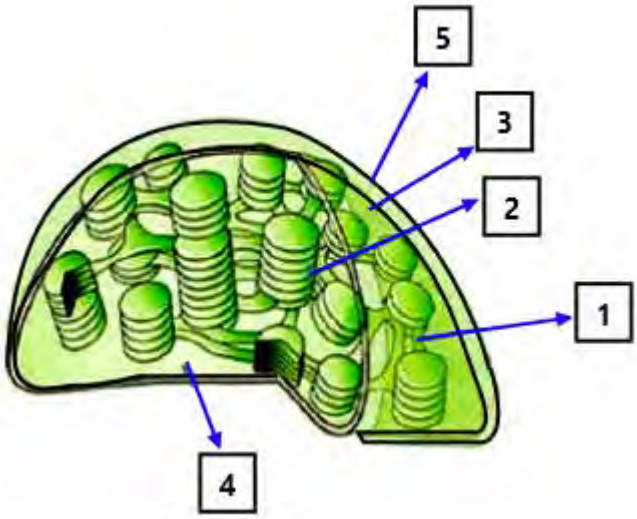
B) Telophase

C) Cytokinesis

D) s-phase

66. Q.Id: 196317

Identify the labelled parts as 1,2,3,4,5 in the below Sectional view chloroplast?



A) 1-Stroma, 2-Granum,3-Stroma Lamellae, 4- Inner membrane, 5-outer membrane

B) 1-Stroma Lamellae, 2-Granum,3-Inner membrane,4-Stroma, 5-Outer membrane

C) 1-Stroma Lamellae, 2- Stroma, 3-Granum,4-Outer membrane, 5-Inner membrane

D) 1-Granum,2-Stroma, 3-Outer membrane, 4- Inner membrane, 5- Stroma Lamellae

67. Q.Id: 196316

Cavity loading lungs is _____

A) Stomata

B) Abdomen

C) Thorax

D) Chest

68. Q.Id: 196313

$'G_0'$ stage of the cell cycle is characterized by .....

A) Division

B) Metabolically inactive

C) Metabolically active

D) Proliferation

69. Q.Id: 196310

Engler and Prantlpublished a phylogenetic system in the monograph.....

A) Die Naturlichen Planzenfamilien

B) Families of flowering plants

C) Species Plantarum

D) Genera Plantarum

70. Q.Id: 196308

Match the following?

Column –I	Column –II	Column –III
(a) Epidermis	(i)Multi nucleated	(p) Protection
(b) Endothecium	(ii) Homogenous	(q) Formation of Micropores
(c) Tapetam	(iii) One celled thick	(r) dehiscence of anther
(d) Sporogenous tissue	(iv) Fibrous thickness	(s) Nourishment

A) (a–i–q),(b–iii–r),(c–iv–q),(d–i–s)

B) (a–iii–p),(b–iv–r),(c–i–s),(d–ii–q)

C) (a–i–s),(b–ii–r),(c–iii–q),(d–iv–p)

D) (a–iv–r),(b–i–s),(c–ii–q),(d–iii–p)

71. Q.Id: 196292

Out of the seven names given below, find out haploid cells?

(i) Antipodal cell

(ii) Egg cell

(iii) Synergid cell

(iv) Polar nuclei

(v) Male gamete

(vi) Nuclear cell

(vii) Chalazal cell

A) (i),(ii),(iv) & (v) only

B) (ii),(iv),(vi) & (vii) only

C) (i), (ii),(iii) & (v) only

D) (ii),(iv),(iii) & (i) only

72. Q.Id: 196283

Assertion (A): Zygote is the link between two generations

Reason (R): Zygote is the product of two gametes and producer of next generation

A) Both A and R are correct and R is the correct explanation for A

B) Both A and R are correct and R is not correct explanation for A

C) A is correct but R is wrong

D) A is wrong but R is correct

73. Q.Id: 196278

(i) When carpels are free, they are called 'A'

(ii) When the carpels fused, they are called 'B'

Here, A and B refers to .....

A) A - syncarpous, B- apocarpous

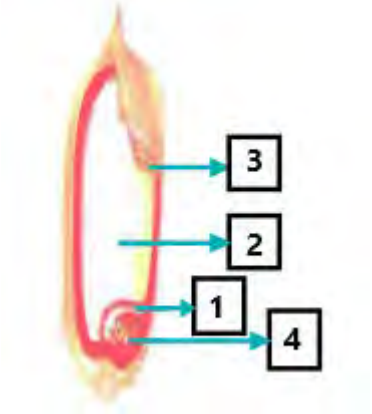
B) A- apocarpous, B- syncarpous

C) A - monocarpous, B- mullticarpous

D) A - mullticarpous, B- monocarpous

74. Q.Id: 196273

Identify the parts labeled 1,2,3,4 in the figure Caryopsis of Oryza?



A) 1- endosperm, 2- scutellum, 3-embryo, 4- pericarp

B) 1-pericarp, 2-embryo, 3-scutellum,4-endosperm

C) 1-scutellum, 2-endosperm, 3-pericarp, 4-embryo

D) 1-embryo, 2- pericarp,3-endosperm,4-scutellum

75. Q.Id: 196266

In cucumber the ovary is ....

A) Absent

B) Epigynous

C) Hypogynous

D) Perigynous

76. Q.Id: 196261

Select the mismatched pair?

A) F.W.Went - Auxin

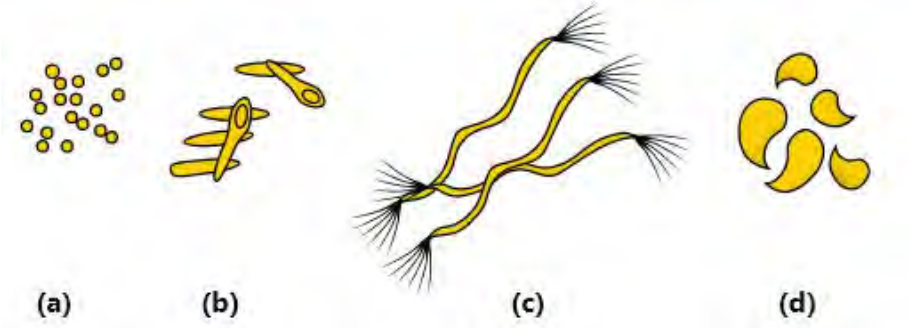
B) Buchner - Zymase

C) H.G.Korana-C_4 pathway

D) Frankel Conrat - RNA

77. Q.Id: 196258

Bacterin are group under four categories based on their shape. Study the given figure and identify A,B,C and D?



A) A - Vibrio, B-Cocei, C- Bacilli, D-Spirilla

B) A - Bacilli, B-Spirilla, C- Vibrio, D-Cocci

C) A - Cocci, B-Bacilli, C-Spirilla, D-Vibrio

D) A-Spirilla. B- Vibrio, C- Cocci, D-Bacilli

78. Q.Id: 196256

Archaebacteria differ from eubacteria in .....

A) Cell membrane structure **B)** mode of mutrition

C) cell shape **D)** mode of reproduction

79. Q.Id: 196255

Salient features like Embriophytic Tracheophytic, Cryptogams refers to.....

A) Angiosperms **B)** Gymnosperms

C) Pteriodophytes **D)** Bryophytes

80. Q.Id: 196254

One of the following scientists was the earliest to attempt more scientific basis for classification.

A) Linnaeus **B)** Theophrastus

C) Aristotle **D)** Whittaker

81. Q.Id: 196108

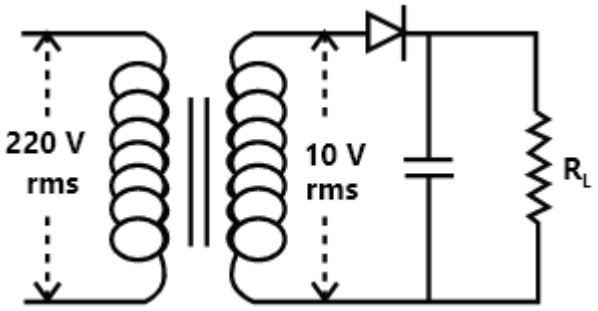
A sinusoidal voltage amplitude modulates another sinusoidal voltage of amplitude 2 kV to result in two side bands, each of amplitude 200 V. Find the modulation index.

A) 0.2 **B)** 0.3

C) 0.4 **D)** 0.5

82. Q.Id: 196107

Figure shows a half -wave rectifier with resistive load R_L, which is far greater than the diode's forward resistance. If the value of capacitance is considerably large, then the D.C. voltage across R_L is _____



A) = 10 V **B)** ≈ 5 V

C) ≈ 14 V **D)** = 28 V

83. Q.Id: 196103

The binding energy per nucleon of $_3Li_7$ and $_2He_4$ nuclei are 5.60 MeV and 7.06 MeV, respectively. Then, in the nuclear reaction $_3Li_7 + {}_1H_1 \rightarrow {}_2He_4 + {}_2He_4 + Q$, the value of Q, the energy released is

A) 19.6 MeV

B) -2.4 MeV

C) 8.4 MeV

D) 17.3 MeV

84. Q.Id: 196100

Rutherford's experiments on scattering of α -particles proved that :

A) Atom is mostly empty

B) Positive charge is uniformly distributed in the atom

C) Number of positive charges is equal to the number of negative charges

D) Atoms contain electrons

85. Q.Id: 196098

A radio transmitter operates at a frequency 880 kHz and a power of 10 kW. What is the number of photons emitted per second ?

A) 1.50×10^{25}

B) 1.60×10^{30}

C) 1.72×10^{31}

D) 2.80×10^{30}

86. Q.Id: 196095

Dimensions of $\epsilon_0 \frac{d\phi_\epsilon}{dt}$ are same as that of (symbols have their usual meanings) _____

A) Potential

B) Current

C) Charge

D) Capacitance

87. Q.Id: 196079

An ideal solenoid has 1000 turns per meter and 8 cm radius. The current in it varies at a uniform rate of $0.02\ A.s^{-1}$. A circular coil of radius 2 cm is placed inside the solenoid such that its axis coincides with that of the solenoid. Find the induced electric field at a point on the circumference of the coil and that at a point outside the solenoid at a distance of 12.8 cm from its axis.

A) $8\pi \times 10^{-8}\ V.m^{-1}$ & $2\pi \times 10^{-7}\ V.m^{-1}$

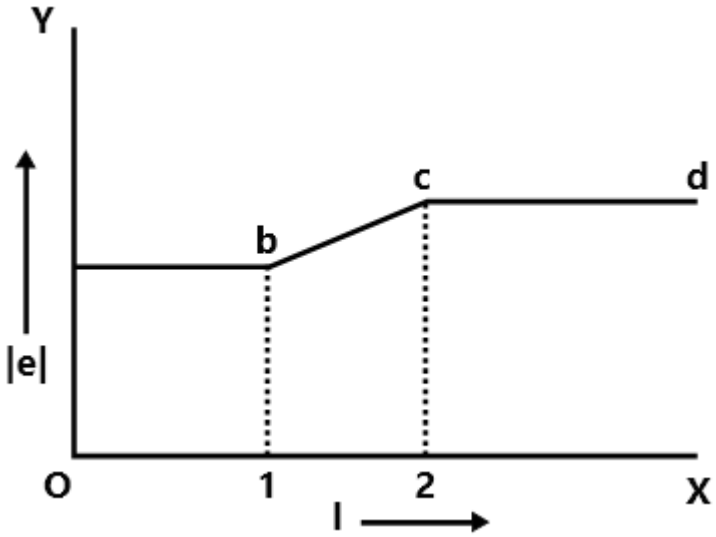
B) $7\pi \times 10^{-7}\ V.m^{-1}$ & $5\pi \times 10^{-7}\ V.m^{-1}$

C) $6\pi \times 10^{-7}\ V.m^{-1}$ & $2\pi \times 10^{-7}\ V.m^{-1}$

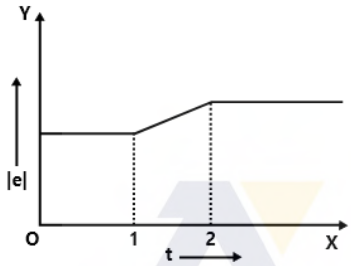
D) $8\pi \times 10^{-7}\ V.m^{-1}$ & $28\pi \times 10^{-7}\ V.m^{-1}$

88. Q.Id: 196067

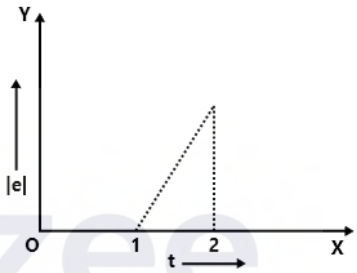
A flexible wire bent in the form of a circle is placed in a uniform magnetic field, such that the field is perpendicular to the plane of the coil. The radius of the coil changes as shown. The graph of magnitude of induced emf in the coil is represented by



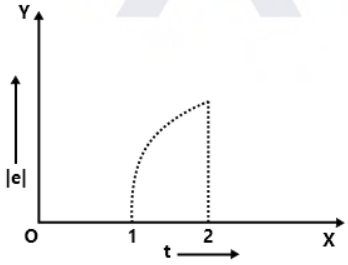
A)



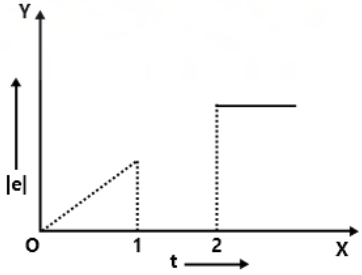
B)



C)



D)



89. Q.Id: 196066

The earth's magnetic field at a certain place has a horizontal component 0.3 G and the total strength 0.5 G. The angle of dip is

A) $\text{Tan}^{-1}\left(\frac{3}{4}\right)$

B) $\text{Sin}^{-1}\left(\frac{3}{4}\right)$

C) $\text{Tan}^{-1}\left(\frac{4}{3}\right)$

D) $\text{Sin}^{-1}\left(\frac{3}{5}\right)$

90. Q.Id: 196063

The rectangular coil of area A is in a field B . Find the torque about the Z-axis when the coil lies in the position shown and carries a current I.

A) IAB in neagtive Z-axis

B) IAB in positive Z-axis

C) 2IAB in positive Z-axis

D) 2IAB in negative Z-axis

91. Q.Id: 196060

Two galvanometers A and B require 3 mA and 5 mA respectively to produce same deflection of 'l_0' divisions. Then,

A) A is more sensitive than B

B) B is more sensitive than A

C) A and B are equally sensitive

D) Sensitiveness of B is $\frac{5}{3}$ times that of A

92. Q.Id: 196053

Assertion (A) : As soon as a source of emf is connected across a conductor, a current immediately starts flowing through it.

Reason (R) : Drift speed of the electron is so large that electron travel from one end of the conductor to the other end almost instantaneously.

A) Both A and R are true and R is a correct explanation for A

B) Both A and R are true and R is not a correct explanation for A

C) A is true, R is false

D) A is false, R is true

93. Q.Id: 196051

A capacitor of capacitance$4\ \mu F$ is charged to a potential of 100 V. It is then disconnected from the battery and connected in parallel with another capacitorC_2. If their common potential is 40 volts, then the value ofC_2 is _____.

A) $2\ \mu F$

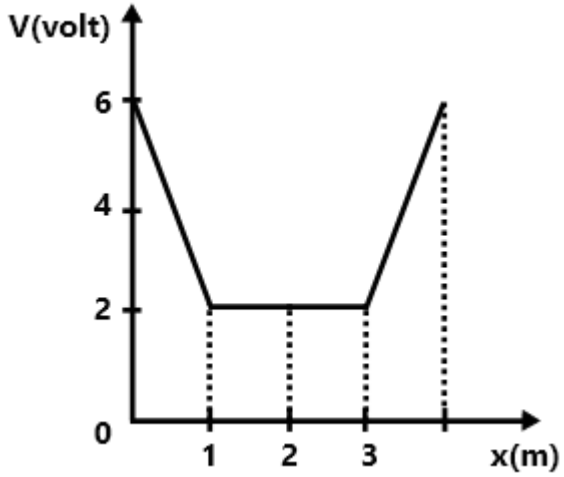
B) $3\ \mu F$

C) $5\ \mu F$

D) $6\ \mu F$

94. Q.Id: 196047

The variation of electric potential with distance from a fixed point is shown in the figure. What is the value of electric field at x = 2 m ?



A) 0

B) $\frac{6}{2}$

C) $\frac{6}{1}$

D) $\frac{6}{3}$

95. Q.Id: 196045

An infinite line charge produces a field of 18×10^5 N.C^{-1}, at a distance of 4 cm. What is the linear charge density ?

A) 18 μC.m^{-1}

B) 5 μC.m^{-1}

C) 4 μC.m^{-1}

D) 10 μC.m^{-1}

96. Q.Id: 196043

A screen is placed 50 cm from a single slit, which is illuminated with a light of wavelength 600 nm. If the distance between the first and third maxima in the diffraction pattern is 3 mm. then calculate its slit width.

A) 0.2 mm

B) 0.4 mm

C) 0.3 mm

D) 0.1 mm

97. Q.Id: 196039

Two equiconvex lenses, each of refractive index 1.5 and focal length 'f' are kept in contact with each other, and the space in between the lenses is filled with a liquid of refractive index 1.75. The focal length of the combination is _____

A) $\frac{f}{3}$

B) $\frac{4f}{3}$

C) 2f

D) $\frac{3f}{4}$

98. Q.Id: 196033

A transverse wave is represented by $x = A\sin(kx - \omega t)$. The velocity of the wave is given by _____

A) kx

B) k/ω

C) wt

D) ω/k

99. Q.Id: 196028

In the kinetic theory of gases, it is assumed that the gas molecules :

A) Repel each other

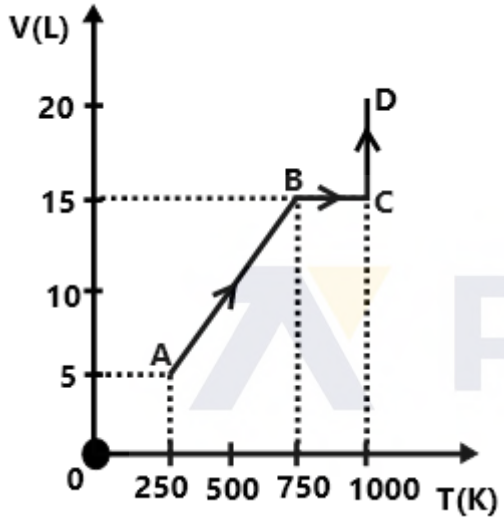
B) Collide elastically

C) Move with uniform velocity

D) Are massless particles

100. Q.Id: 196025

Two moles of helium gas are taken along the path ABCD (as shown). The work done by the gas is ___



A) $2000\,R\left(1+\ln\left(\frac{4}{3}\right)\right)$

B) $500\,R(3+\ln(4))$

C) $500\,R\left(2+\ln\left(\frac{16}{9}\right)\right)$

D) $1000\,R\left(1+\ln\left(\frac{16}{9}\right)\right)$

101. Q.Id: 196022

100 L of gasoline maintained at $10^{o}C$ is filled into a steel tank, kept in a room at $10^{o}C$. When the temperature of the room is increased to $30^{o}C$. how much gasoline will overflow ? Given, $\alpha_{steel} = 12\times10^{-6}\,{}^{o}C^{-1}$ and coefficient of volume expansion for gasoline $= 95\times10^{-5}\,{}^{o}C^{-1}$

A) 1.37 L

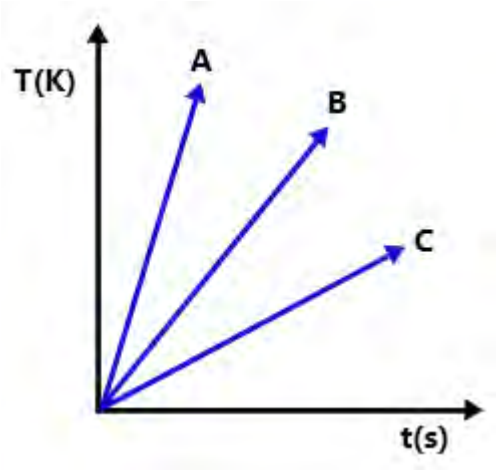
B) 1.82 L

C) 1.60 L

D) 7.20 L

102. Q.Id: 196014

When heat is supplied at equal rates to three substances A, B, C and their temperatures are plotted against time, the following graph is obtained. Which material among A, B and C has the least heat capacity?



A) A

B) B

C) C

D) Can't be determined

103. Q.Id: 196011

Identify the incorrect statement about 'angle of contact' :

(a) Angle of contact depends upon the inclination of the solid surface to the liquid surface.

(b) If the angle of contact of a liquid and a solid surface is less than 90^{o} , then the liquid spreads on the surface of the solid.

(c) Angle of contact increase with increase in temperature of liquid.

(d) The value of angle of contact for water and glass is zero.

A) (a) Only

B) (b) Only

C) (c) Only

D) (d) Only

104. Q.Id: 195864

An air bubble of radius 1.0 cm rises with a constant speed of $3.5\ \text{mm}\ \text{s}^{-1}$ through a liquid of density $1.75 \times 10^{3}\ \text{kg}\ \text{m}^{-3}$. Neglecting the density of air, the coefficient of viscosity of the liquid is _____ $\text{kg}\ \text{m}^{-1}\ \text{s}^{-1}$

A) 54.5

B) 109

C) 163.5

D) 218

105. Q.Id: 195858

Steel is preferred for making spring over copper. why ?

A) Steel is cheaper

B) Young's Modulus of steel is more than that of copper

C) Youngs' modulus of copper is more than that of steel

D) Steel less likely to be oxidized

106. Q.Id: 195856

Identify the correct expression between radius (R), density(ρ) and the escape velocity from the surface(v_e) of a planet.

A) $v_e \propto \sqrt{\frac{\rho}{R}}$

B) $v_e \propto \rho . R$

C) $v_e \propto \frac{1}{R\sqrt{\rho}}$

D) $v_e \propto R \cdot \sqrt{\rho}$

107. Q.Id: 195818

A satellite of the earth is revolving in a circular orbit with uniform speed 'v'. If the gravitational force suddenly disappears, the satellite will _____

A) Continue to move with velocity 'v' along the original orbit

B) Move with a velocity 'v' tangentially to the original orbit

C) Fall down with increasing velocity

D) Comes to rest somewhere on the original orbit

108. Q.Id: 195817

A spring balance is loaded with two blocksm_1 and m_2, wherem_1 is rigidly fixed with the spring andm_2 is just kept over blockm_1. The maximum energy of oscillation possible, assuming both the blocks are always in contact with each other, is

A) $\frac{m_1^2 g^2}{k}$

B) $\frac{m_1 , g^2}{2k}$

C) $\frac{m_2^2 g^2}{2k}$

D) $\frac{(m_1 + m_2)^2 g^2}{2k}$

109. Q.Id: 195815

A body of mass 10 g is executing simple harmonic motion about a point with an amplitude 20 cm. If its maximum velocity is100 cm.s^{-1}, its velocity will be 50 cm.s^{-1} at a distance of _____ cm from its mean position.

A) $10\sqrt{3}$

B) $15\sqrt{3}$

C) $5\sqrt{3}$

D) $20\sqrt{3}$

110. Q.Id: 195814

If the radius of a spherical object, rotating about its diameter with a time period of 2 seconds, is reduced to half its actual value, keeping its mass unchanged, its time period becomes _____ (assuming zero external torque)

A) Remains the same

B) 6 s

C) 0.5 s

D) 1 s

111. Q.Id: 195812

A solid cylinder of mass 'm' and radius 'r' starts rolling down an inclined plane of inclination θ. If the friction is just enough to prevent slipping, the speed of its centre of mass after it has descended through a height 'h' is given by _____

A) $\sqrt{\frac{4}{3}gh}$

B) $\sqrt{\frac{4gh}{3}}$

C) $\frac{3}{4}gh$

D) $\sqrt{\frac{3gh}{4}}$

112. Q.Id: 195810

The angular speed of a fly-wheel making 180 rpm is _____

A) $(4\pi)\ \text{rad.s}^{-1}$

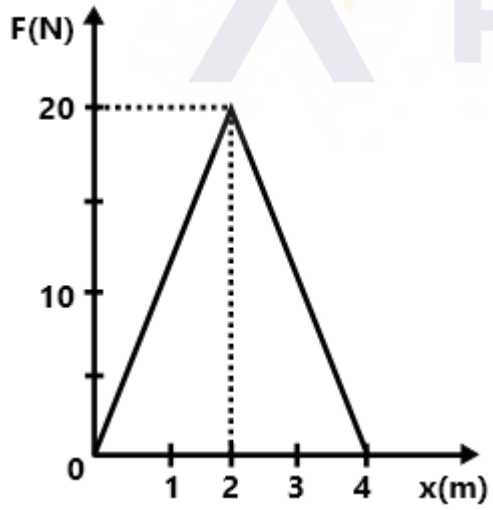
B) $(6\pi)\ \text{rad.s}^{-1}$

C) $(2\pi)\ \text{rad.s}^{-1}$

D) $\left(\frac{54}{\pi}\right)\ \text{rad.s}^{-1}$

113. Q.Id: 195809

The graph between resistive force F acting on a body and the distance covered by the body is shown in the figure. If the mass and initial velocity of the body are 25 kg and $2\ \text{m.s}^{-1}$ respectively, find its kinetic energy after having travelled a distance of 4 m



A) 10 J

B) 20 J

C) 40 J

D) 50 J

114. Q.Id: 195808

A force acts on a body of mass 50 kg, for 10 seconds. When the force stops acting on the body the body covers 80 m in the next 10 seconds . What is the magnitude of the force ?

A) 40 N

B) 50 N

C) 30 N

D) 60 N

115. Q.Id: 195807

A student whirls a stone in a horizontal circle of radius 5m at height of 5m above ground. The string breaks and the sone files off horizontally. The stone covers a horizontal distance of 20 m. The magnitude of centrifugal acceleration of the stone when it breaks off is _____ $\left(g = 10\ m.s^{-2}\right)$

A) $80\ m.s^{-2}$

B) $90\ m.s^{-2}$

C) $140\ m.s^{-2}$

D) $163\ m.s^{-2}$

116. Q.Id: 195806

A particle starts from origin at t = 0 with a velocity of $15\hat{i}\ m.s^{-1}$ **and moved in xy-plane with an acceleration of** $15\hat{i} + 20\hat{j}\ m.s^{-2}$**. The y-coordinate of the particle when it has 180 m as its x-coordinate is _____**

A) 180 m

B) 120 m

C) 160 m

D) 200 m

117. Q.Id: 195805

A stone is just released from the window of a train moving along a horizontal straight track. The stone will hit the ground following a _____

A) Straight line path

B) Circular path

C) Parabolic path

D) Hyperbolic path

118. Q.Id: 195804

For a body projected vertically upwards with a velocity v_0 from the ground, match the following ?

List1	List2
A. $\overrightarrow{v_{av}}$ (Average velocity)	I. $\frac{v_0}{g}$,
B. u_{av} (Average speed)	II. $\frac{\vec{v_1}+\vec{v_2}}{2}$ over any time - interval
C. T_{ascent}	III. $\frac{v_0}{2}$ over the total time of its flight
D. $T_{descent}$	IV. $\frac{v_0}{g}$

A) A->II, B->III, C->IV, D->I

B) A->III, B->IV, C->I, D->II

C) A->IV, B->I, C->II, D->III

D) A->IV, B->I, C->III, D->II

119. Q.Id: 195803

Match the following ?

List1	List2
A. Conductance	I. Gray
B. Magnetic Induction	II. Lumen
C. Absorbed dose	III. Tesla
D. Luminous flux	IV. Siemens

A) A->I, B->III, C->II, D->IV

B) A->IV, B->III, C->II, D->I

C) A->IV, B->I, C->III, D->II

D) A->IV, B->III, C->I, D->II

120. Q.Id: 195802

Force of friction and tension in a string are _____ in origin

A) Gravitational forces

B) Electromagnetic forces

C) Nuclear forces

D) Weak nuclear forces

121. Q.Id: 195482

Benzoic acid gives benzene on being heated with 'X' and phenol gives benzene on being heated with 'Y'. Then, X and Y respectively are:

A) Soda-lime and Cu

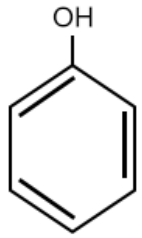
B) Zn-dust and Soda-lime

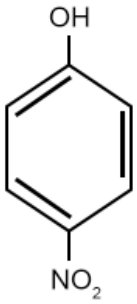
C) Zn-dust and NaOH

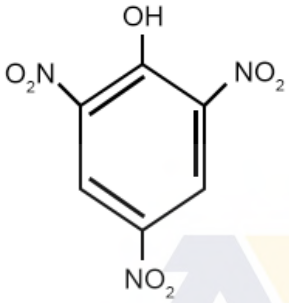
D) Soda-lime and Zn-dust

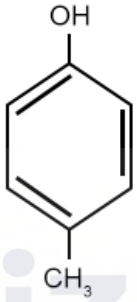
122. Q.Id: 195481

Which among the following is most acidic?

A) 

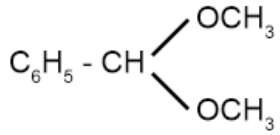
B) 

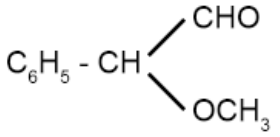
C) 

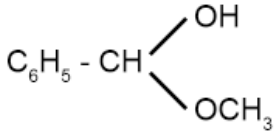
D) 

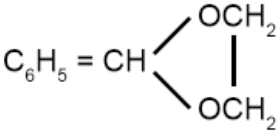
123. Q.Id: 195480

Identify the correct structure of methyl hemiacetal of benzaldehyde from the following.

A) 

B) 

C) 

D) 

124. Q.Id: 195479

During the process of preparation of $CHCl_3$,which among the following statements are true?

(i) Bleaching powder on reaction withH_2O gives Cl_2.

(ii)Cl_2 reacts with ethanol and produces acetic acid.

(iii) Chloral is formed from the reaction of excessCl_2 with acetaldehyde.

(iv)$Ca(OHH)_2$ cannot hydrolyze chloral to give$CHCl_3$

A) (i) & (ii) only

B) (ii) & (iii) only

C) (iii) & (iv) only

D) (i) & (iii) only

125. Q.Id: 195478

Which of the following pairs of solutions can be distinguished by Fehling solution?

A) Glucose and Fructose

B) Fructose and Sucrose

C) Fructose and Mannose

D) Lactose and Maltose

126. Q.Id: 195476

Co is 27th element in periodic table. The Electronic configuration and Magnetic moment of its dipositive ion respectively, are____

A) $[Ar]3d^7, \sqrt{24}$B.M

B) $[Ar]3d^7, \sqrt{15}$B.M

C) $[Ar]3d^74s^2, \sqrt{15}$B.M

D) $[Ar]3d^74s^2, \sqrt{8}$B.M

127. Q.Id: 195466

Which oxide of Nitrogen, among the following, is a colored gas?

A) N_2O_5

B) NO_2

C) NO

D) N_2O

128. Q.Id: 195465

Ionization energy of nitrogen is more than that of oxygen because of ------

A) Higher penetrating effect

B) Smaller size of N-atom

C) Greater attraction of electrons by the nucleus

D) The extra stability of half filled p-orbital

129. Q.Id: 195463

The oxide formed by iodine which is used for the estimation of carbon monoxide is___

A) I_2O_4

B) I_2O_5

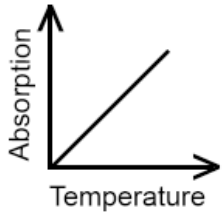
C) I_2O_3

D) I_2O_7

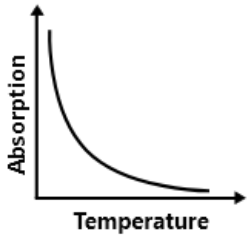
130. Q.Id: 195462

Which of the following Absorption-Temperature graphs represent the variation of physical adsorption with temperature?

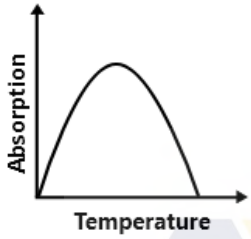
A)



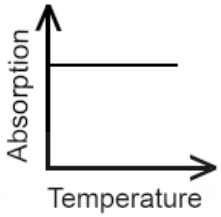
B)



C)



D)



131. Q.Id: 195461

For the reaction 2 A +B_2 → 2C, the following data is provided. Find the overall order of this reaction.

Experiment	$[A](mol.L^{-1})$	$[B](mol.L^{-1})$	Rate $(mol.L^{-1}.s^{-1})$
1.	0.5	0.5	1×10^{-4}
2.	0.5	1.0	2×10^{-4}
3.	1.0	1.0	2×10^{-4}

A) 2

B) 0

C) 3

D) 1

132. Q.Id: 195460

The electrical resistance of a column of0.05 M NAOH solution of diameter lem and length 50cm is 6.5 x10^3 ohm. Its molar conductivity will be

A) 229.5 S cm^2mol^{-1}

B) 196 S cm^2mol^{-1}

C) 149 S cm^2mol^{-1}

D) 280 S cm^2mol^{-1}

133. Q.Id: 195459

Which among the following correctly represents the reducing strength of given species in medium?

A) $Cu^{2+} < Pb^{2+} < Zn^{2+} < Al^{3+}$

B) $Al^{3+} < Zn^{2+} < Pn^{2+} < Cu^{3+}$

C) $Pb^{2+} < Cu^{2+} < Al^{3+} < Zn^{2+}$

D) $Zn^{2+} < Pb^{2+} < Cu^{2+} < Al^{3+}$

134. Q.Id: 195458

If the weight ratio of non-electrolyte solutes in two isotonic solutions of A and B is 2: 3, then find the ratio of their molecular weights.

A) 2 : 3

B) 3 : 2

C) 3 : 4

D) 4 : 3

135. Q.Id: 195457

The vapor pressure of a dilute solution of glucose is 750 mm of mercury at 373 K. The mole fraction of the solute is_____

A) $\frac{1}{10}$

B) $\frac{1}{7.6}$

C) $\frac{1}{35}$

D) $\frac{1}{76}$

136. Q.Id: 195456

In CCP arrangement, the total number of octahedral voids are____

A) 12

B) 2

C) 4

D) 8

137. Q.Id: 195455

During estimation of N present in an orgonic compound by Kjeldahl's method, the ammonia evolved from 0.5g of the compound in Kjeldahl's estimation of N. neutralized 10mL of 1M H_2SO_2. The % of N in the compound is___

A) 56%

B) 48%

C) 30%

D) 70%

138. Q.Id: 195454

(i) The IUPAC name of acetone is_____

(ii) The corresponding functional isomer of acetone is _____

A) (i) Secondary propanone; (ii) Propanoic acid

B) (i) Tertiary propanone; (ii) Propanol

C) (i) Butanone; (ii) Butanol

D) (i) Propanone; (ii) Propanal

139. Q.Id: 195453

Which among the following oxides of nitrogen is a potent greenhouse gas?

A) N_2O

B) NO

C) NO_2

D) N_2O_5

140. Q.Id: 195452

Which element among the following can react with steam?

A) C

B) Si

C) Ge

D) Sn

141. Q.Id: 195450

Identity the incorrect statement in case of diborane structure

A) There are 2 bridging H atoms in diborane

B) The H atoms are not in the same plane in diborane

C) B atom is SP^3 hybridized in diborane

D) All B-H bonds in diborane are similar

142. Q.Id: 195449

A sodium salt of an unknown anion when treated with $MgCl_2$ gave a white precipitate only upon boiling. Identify the anion.

A) SO_4^{2-}

B) CO_3^{2-}

C) NO_3^-

D) HCO_3^-

143. Q.Id: 195447

The number of co-ordination bonded water molecules associated with $CuSO_4.5H_2O$ is___

A) 0

B) 2

C) 4

D) 1

144. Q.Id: 195446

Given the pK_a of a weak acid HA as 4.60 and pK_b of a weak base BOH as 4.80, then find the pH of 0.1 M solution of the salt BA, formed from HA and BOH.

A) 7.10

B) 6.90

C) 4.70

D) 9.40

145. Q.Id: 195445

Consider the following reactions in which all the reactants and products are in the gaseous state

$2\ PQ \rightleftharpoons P_2 + Q_2 \quad K_1 = 2.5 \times 10^5$

$PQ + \frac{1}{2} R_2 \rightleftharpoons PQR \quad K_2 = 5 \times 10^{-3}$

Then the value of Kg for the equilibrium $\frac{1}{2} P_2 + \frac{1}{2} Q_2 + \frac{1}{2} R_2 \rightleftharpoons PQR$ **equals_____**

A) 2.5×10^{-3}

B) 5×10^{-3}

C) 5×10^{-5}

D) 1×10^{-5}

146. Q.Id: 195428

If the enthalpy of combustion of CH_4 and CH_3OH **are '–x' and 'y' respectively, then find the enthalpy of the reaction** $CH_4 + \frac{1}{2} O_2 \rightarrow CH_3OH$

A) -x+y

B) x-y

C) -(x+y)

D) x+y

147. Q.Id: 195426

A certain reaction. for which the enthalpy change is 24.85 kJ. is at equilibrium at $82°C$**. Find the value of** ΔS **for this reaction.**

A) $55\ J.K^{-1}.mol^{-1}$

B) $60\ J.K^{-1}.mol^{-1}$

C) $68.5\ J.K^{-1}.mol^{-1}$

D) $70\ J.K^{-1}.mol^{-1}$

148. Q.Id: 195425

A sample of drinking water was found to be contaminated with CCl_4**. The level of contamination was 8.5 ppm by mass. (Molecular mass of** CCl_4 **= 153.18** $g.mol^{-1}$**)**

(i) Calculate the contamination level in mass percent

(ii) Calculate the contamination level in molality

A) (i) 0.85%; (ii) $85 \times 10^{-4} m$

B) (i) 8.5×10^{-4}%; (ii) $0.55 \times 10^{-4} m$

C) (i) 85%; (ii) $85 \times 10^{-4} m$

D) 8.5 %, (ii) 55 m

149. Q.Id: 195423

Find the normality of sodium bicarbonate solution containing 8.4 g of $NaHCO_3$ **in 250 ml (Equivalent weight of** $NaHCO_3 = 84\ g.eq^{-1}$**)**

A) 0.1 N

B) 0.4 N

C) 1 N

D) 4 N

150. Q.Id: 195422

An evacuated glass vessel weighs 50 g when empty, 144 g when filled with a liquid of density 0.47 g.L^{-1} and 50.5 g when filled with an ideal gas at 760 mm Hg at 300K. Then find the molar mass of the ideal gas.

A) 61.57 **B)** 130.98

C) 85.94 **D)** 125.75

151. Q.Id: 195421

Calculate the density of H_2 gas at 230°C **and 6 atm pressure.**

A) 0.641 g.ml^{-1} **B)** 0.293 g.ml^{-1}

C) 0.082 g.ml^{-1} **D)** 0.010 g.ml^{-1}

152. Q.Id: 195418

If a molecule has trigonal bipyramidal shape, the hybridization is____

A) sp^3 **B)** dsp^2

C) dsp^3 **D)** d^2sp^3

153. Q.Id: 195417

In XeF_2, XeF_4 and XeF_6**, the number of lone pairs of electrons on the central atom, respectively are**

A) 2, 3, 1 **B)** 3, 3, 1

C) 1, 2, 3 **D)** 3, 2, 1

154. Q.Id: 195415

In which of the following substances will hydrogen bond be strongest?

A) HCl **B)** H_2O

C) HI **D)** H_2S

155. Q.Id: 195413

Identify the correct order with respect to first ionization energies of the given elements:

A) C > Be > B > Li **B)** C > B > Be > Li

C) Be > C > B > Li **D)** Li > Be > B > C

156. Q.Id: 195412

An element of atomic number 118 would be a/an

A) Alkali Metal

B) Lanthanide

C) Noble gas

D) Transition element

157. Q.Id: 195410

Match the following:

List1	List2
A. F	I. Maximum ionization enthalpy
B. Cl	II. Maximum atomic radius
C. He	III. Maximum electro negativity
D. Cs	IV. Maximum negative electron gain enthalpy

A) A->iv; B->iii; C->i; D->ii

B) A->iii; B->i; C->iv; D->ii

C) A->iii; B->iv; C->i; D->ii

D) A->i; B->iv; C->iii; D->ii

158. Q.Id: 195406

The region of electromagnetic spectrum and the energy of photon, respectively, of the line obtained at 1.4 x$10^6 m^{-1}$ in the atomic spectrum of hydrogen are_____$[h = 6.626 \times 10^{-34} J.s]$

A) Visible, $13.84 \times 10^{-19} J$

B) Visible, $27.72 \times 10^{-20} J$

C) U.V region, $16.9 \times 10^{-20} J$

D) Infrared region, $14.2 \times 10^{-18} J$

159. Q.Id: 195405

The number of waves made by a Bohr electron in one complete revolution in its 4th orbit is

A) 1

B) 2

C) 3

D) 4

160. Q.Id: 195403

If the uncertainties in position & momentum are equal, the uncertainty in the velocity is____

A) $\sqrt{\frac{h}{\pi}}$

B) $\sqrt{\frac{h}{2\pi}}$

C) $\frac{1}{2m}\sqrt{\frac{h}{\pi}}$

D) $\frac{1}{2m}\sqrt{\frac{h}{2\pi}}$