BOOKLET SERIES B

Paper Code 03   **Test Type:** TEST SERIES

LIFE SCIENCES

Duration: 2:00 Hours   **Date: 24-05-2019**

Maximum Marks: 170

Read the following instructions carefully:

* Single Paper Test is divided into **THREE** Parts.

Part - A: This part shall carry **10** questions. Each question shall be of **2 marks.**

Part - B: This part shall carry **25** questions. Each question shall be of **2 marks.**

Part - C: This part shall contain **25** questions. Each question shall be of **4 marks**.

* Darken the appropriate bubbles with HB pencil/Ball Pen to write your answer.

* There will be negative marking @25% for each wrong answer.

* The candidates shall be allowed to carry the Question Paper Booklet after completion of the exam.

* For rough work, blank sheet is attached at the end of test booklet.

PART-A

1. A can do a piece of work in 10 days; B in 15 days. They work for 5 days. The rest of the work was finished by C in 2 days. If they get Rs. 1500 for whole work, then the daily wages of B and C together is :
   (a) Rs. 150 (b) Rs. 225 (c) Rs. 250 (d) Rs. 300

2. A train can travel 50 % faster than a car. Both start from point A at the same time and reach point B 75 kms away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is:
   (a) 100 kmph (b) 110 kmph (c) 120 kmph (d) 130 kmph

3. What should come next in the series ?

   | XC | VE | TG | RI | ? |

   (a) PK (b) PQ (c) LO (d) MN

4. 6 students A, B, C, D, E, F are to be called for an interview based on their percentage of marks secured in the examination. One who secures the highest marks is called first and next in the decreasing order of their secured marks they are called.
   B secured 75 % marks and got a call after C.
   F got the call before E.
   D was not the last person to get the call as he got 72 % marks.
   If C got more marks than B, but less than A.
   Then who was the second last student to appear in the interview and what could be his possible mark in the examination ?
   (a) F, 73 (b) C, 74 (c) F, 71 (d) C, 70

5. If 1 cubic cm of cast iron weighs 21 gms, what will be the weight (in kg)of a cast iron pipe of length 1 metre with a bore of 3 cm and in which thickness of the metal is 1 cm.
   (a) 26.4 (b) 20 (c) 30 (d) 30.6

6. In the series given below follows a certain pattern. What should come following the same pattern in place of question mark (?) ?

   | 68 | 130 | 222 | 350 | ? |

   (a) 498 (b) 510 (c) 500 (d) 520

7. Reeta walks 30 m North. Then she turns right and walks 30 m then she turns right and walks 55m. Then she turns left and walks 20 m. Then she again turns left and walks 25m. How many metres away is she from her original position?
   (a) 45 m (b) 50 m (c) 66 m (d) None of these

8. A speaks the truth in 75 % cases, and B speaks the truth in 80 % cases. In what percentage of cases they are likely to contradict each other while narrating the same incident ?
   (a) 30 (b) 20 (c) 50 (d) 35

9. In 2018, Ram spends 75 % of his income. In the next year his income increased by 20 % and his expenditure also increases by 10 %. Find the percentage increase in his savings ?
   (a) 50 (b) 45 (c) 40 (d) 60

10. In a 100 m race A runs at a speed of 8 km/hr. Even after giving B a start of 4 m. A still beats B by 15 seconds. What is the speed of B in km/hr ?
    (a) 6 (b) 5.76 (c) 6.75 (d) 6.25

PART-B
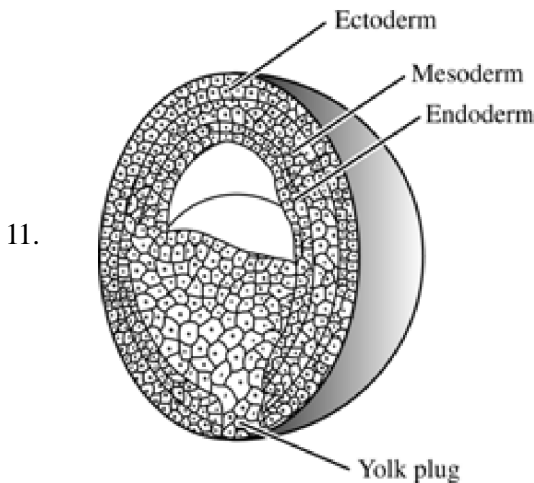
11. Which of the following developmental processes has been most recently completed in the amphibian embryo shown above?

    (a) Neurulation   (b) Cleavage

    (c) Blastulaformation   (d) Gastrulation

12. Mutation of homeotic cluster genes often results in which of the following developmental defects in Drosophila?

    (a) Absence of a group of contiguous segments

    (b) Transformation of one segment into another

    (c) Polarity defects in every segment along the anterior-posterior axis

    (d) Tumor formation in imaginal discs

13. How amnion is formed in the case of humans

    (a) By pulling of Hypoblast   (b) By pushing of hypoblast

    (c) After the formation of epiblast (d) Via breakage of epiblast

14. Th process by which cells become structurally and functionally distinct is known as

    (a) Specification   (b) Determination

    (c) Differentiation   (d) Both (a) and (c)

15. Fertilization normally

    (a) Reinstates diploidy   (b) Follows blastulation

    (c) Is required for parthenogenesis (d) Follows gastrulation

16. Proinsulin is an 84 residue polypeptide with six cysteines. How many different disulphide combinations are possible?

    (a) 18   (b) 15   (c) 28   (d) 36

17. The free energy to synthesize a mixed anhydride bond of 1, 3-Bisphosphoglycerate is generated by the oxidation of

    (a) an aldehyde to acid   (b) an alcohol to acid

    (c) an alcohol to aldehyde   (d) NADH to NAD$^+$

18. Amount in mg of sodium sulphate (Na_2SO_4) required to prepare 1 litre of 50 ppm sulphate solution.

    (a) 80 mg   (b) 74 mg   (c) 50 mg   (d) 96 mg

19. A protein (Mw = 1000kDa) was coded by nuclear genome considering 25% of the DNA is forming introns. Calculate the mass of DNA in grams, which is required to code the protein.

(Mw of 1 amino acid = 110 Da, Mw of 1 base pair = 660 Da and 1Da = 1g/mol)

(a) 3.97×10^{-17} g   (b) 2.98×10^{-17} g

(c) 4.6×10^{-16} g   (d) 1.66×10^{-18} g

20. Match the following enzymes with their reaction intermediates

Enzymes	Reaction intermediate
P. Ribonuclease	(i) Carbonium ion
Q. Lysozyme	(ii) Oxyganion
R. Chymotrypsin	(iii) Pentavalent phosphorus intermediate
S. Carboxypeptidase	(iv) mixed anhydride

(a) P-(iii), Q-(iv), R-(i), S-(ii)   (b) P-(ii), Q-(i), R-(iv), S-(iii)

(c) P-(iii), Q-(i), R-(ii), S-(iv)   (d) P-(iv), Q-(ii), R-(iii), S-(i)

21. An enzyme catalysed reaction was measured in the presence and absence of an inhibitor. For an uncompetitive inhibition

(a) Only K_m is increased   (b) Both K_m and V_{max} is decreased

(c) Only V_{max} is decreased   (d) Both K_m and V_{max} are not affected

22. From the given option, find out the hallmarks of cancer :

1. Self sufficiency in growth signals.   2. Insensitivity to antigrowth signals.

3. Evasion of apoptosis.   4. Limitless replicative potential.

5. Sustained angiogenesis.   6. Tissue invasion and metastasis.

(a) 1, 3, 4, 5   (b) 1, 5, 6   (c) 2, 3, 4, 5, 6   (d) 1, 2, 3, 4, 5, 6

23. At gap junction, the two plasma membranes from adjacent cells are joined by tightly packed, hollow cylinders called connexons. In vertebrates, each connexon is a circular assembly of six subunits of the protein connexin. Invertebrates do not have connexins, instead they produce proteins called .... that appear to serve the same function ?

(a) Clandins   (b) Intexin   (c) Innexins   (d) Occludins

24. A muscle cell has an intracellular [Na$^+$] of 14 mM and an extracellular [Na$^+$] of 140 mM. Assuming that 2.3 RT/F = 60 mV, what would the RMP if the muscle cell membrane were permeable only to Na$^+$?

(a) +90 mV   (b) -60 mV   (c) +60 mV   (d) +80 mV

25. Which of the following is NOT a property of the mammalian signal recognition particle (SRP) :

(a) It targets nascent secretary polypeptides to the rough endoplasmic reticulum

(b) It temporarily arrests translation

(c) It binds to the signal sequence of secretary proteins

(d) It contains both RNA and several polypeptide

26. Total time period for animal cell division is 24 hrs. If the initial number of cell in the culture are 2×10^6/ml, Calculate the final number of cells after 72 hrs ?

(a) 16×10^7 cells/ml   (b) 1.6×10^7 cells/ml

(c) 1.6×10^6 cells/ml   (d) 1.6×10^5 cells/ml

27. Ephrins (A and B types) bind to the Eph receptors (A and B types) & then stimulate angiogenesis, guide cell and axon migration. So Eph receptors of Ephrins are

    (a) Ser-Thr-Kinase
    (b) GPCR
    (c) Ras-Map Kinase
    (d) Receptor tyrosine Kinase

28. Primary auditory cells in organ of corti are

    (a) Inner rod cell
    (b) Inner hair cell
    (c) Outer hair cell
    (d) Outer rod cell

29. What is true about Nereis, scorpion, cockroach and silver fish?

    (a) they all possess dorsal heart
    (b) none of them is aquatic
    (c) they all belong to the same phylum
    (d) they all have jointed paired appendages

30. The reagent used for bacterial cell wall lysis is:

    (a) Phenol
    (b) Penicillin
    (c) Lysozyme
    (d) CTAB

31. DNA can be purified from proteins after cell lysis by Phenol-chloroform extraction method. Phenol used here as it:

    (a) Denatures cell-debris and leaves nucleic acid protein complex in aqueous phase.
    (b) Denatures DNA and leave protein in aqueous phase.
    (c) Denatures RNA-protein complex and leaves DNA is aqueous phase.
    (d) Denatures proteins and leaves nucleic acids in aqueous phase.

32. Which of the following is in correct order of treatment regarding DNA extraction?

    (a) Cell lysis – Phenol – Protease – Ethanol
    (b) Cell lysis – RNase – Ethanol – Protease
    (c) RNase – Protease – Cell lysis – Ethanol
    (d) Cell lysis – Phenol – RNase – Ethanol

33. Small oligonucleotides are used as primers in PCR. These oligonucleotides can be analysed using which of the following electrophoresis method?

    (a) Agarose Gel Electrophoresis
    (b) Denaturing PAGE
    (c) Native PAGE
    (d) All of these

34. Which of the following methods is most suitable for studying large-scale gene expression at transcription level?

    (a) Western blotting
    (b) Microarray
    (c) RT-PCR
    (d) Northern blotting

35. Diffusion of proteins within a membrane can be studied by:

    (a) Scanning electron microscopy
    (b) FRAP
    (c) Atomic force microscopy
    (d) Freeze facture and etching

PART-C

36. In cloning experiments on the frog Xenopuslaevis, nuclei were removed from intestinal cells of tadpoles and transplanted into zygotes whose nuclei had been removed. A small percent of these zygotes developed into normal frogs, suggesting that

    (a) intestinal cells can be transformed into all cell types
    (b) frogs do not have the same developmental constraints as other species
    (c) intestinal cell nuclei are highly specialized
    (d) the genomes of all somatic cells are equivalent

37. In an experiment, the first cleavage plane of an amphibian zygote was manipulated so that the gray crescent was contained in only one of the two blastomeres that result from the first cleavage. The two blastomeres were then separated. What is the expected fate of the blastomeres?

   (a) The blastomere with the gray crescent will grow in size more quickly than the one without the gray crescent.

   (b) The blastomere with the gray crescent will form a complete, but small, embryo.

   (c) The blastomere without the gray crescent will form a complete, but small, embryo.

   (d) The blastomere with the gray crescent will stop dividing and die before the second cleavage.

**Common statement for Q. No. 38 to 39**

38. According to the ABC model of flower development in Arabidopsis, three classes of organ identity genes— designated A, B, and C— are required to specify the identity of floral organs in each whorl of a flower. As shown in the figure below, expression of A class genes alone in the first (outermost) whorl specifies sepals; expression of A and B class genes in the second whorl specifies petals; expression of B and C class genes in the third whorl specifies stamens; and expression of C class genes alone specifies carpels.

   A and C class genes restrict each other's expression. Null mutations in A class genes lead to expression of C class genes in all four whorls, whereas null C class mutations result in expression of A class genes in all whorls.
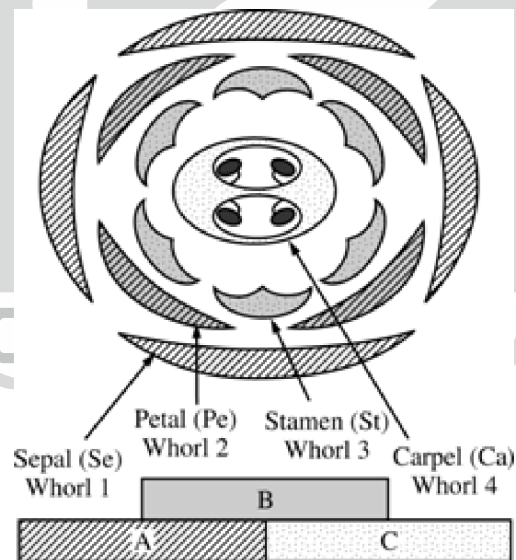
   If wild type Arabidopsis were transformed with a chimeric gene composed of a C class promoter fused to a B class coding sequence, which of the following arrangements (outer to inner) would be predicted

   (a) Se Pe St St   (b) Se Pe Ca Ca

   (c) Pe Pe St Ca   (d) Se Se St Ca

39. According to the ABC model, which of the following arrangements of floral organs (from outermost to innermost whorl) would be predicted for a null mutation in a B class gene?

   (a) Se Pe St Ca   (b) Se Se Ca Ca

   (c) Pe Pe St St   (d) Se Pe Pe Se

40. In an experiment sperm removed from epididymis of a male mouse was added in a dish containing appropriate media and oocyte. No fertilization was seen. However when sperm from epididymis were directly placed in uterus of an ovulated female she became pregnant.These observations suggest that

(a) The sperm need to travel some distance to attain fertilizing ability

(b) The oocyte secretes some biochemical or factors which sperm to fertilize

(c) The hormones in body help sperm to attain fertilizing ability

(d) The contents of female reproductive tract interact with sperm and activate it for fertilization.

41. A student takes some tablets, that were offered at a disco, and without asking, she swallowed them. After some time she starts to hyperventilate, pulse rate increased and becomes very hot. What is the most likely action of the tablets?

(a) Inhibitor of glycolysis

(b) Inhibitor of mitochondrial ETS

(c) Uncoupling agent

(d) Inhibitor of the transporter of ADP into mitochondria to be phosphorylated

42. The Gibbs free energy of a ligand with a protein receptor is determined at 25ºC. The value of ΔG_0 thus determined is 1.36 kcal mol^{-1}. The binding constant for the ligand protein association is

(R = 1.97 cal/mol/k)

(a) 1.30×10^{-12} (b) 0.10   (c) 1.00   (d) 0.96

43. A mixture of Aspartate (Mw = 133.11 g/mol), Thymine (Mw = 126.12 g/mol), Phenylalanine (Mw = 165.17 g/mol), Toluene (Mw = 110.6 g/mol) and Phenol (Mw = 94.11 g/mol). Subjected to chromatographic separation using HPLC systems at pH = 7. The following pattern of separation was observed.
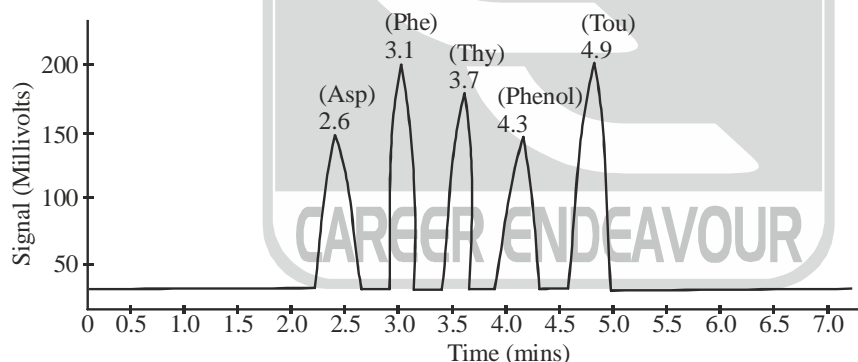
On analysing the curve, the type of chromatography and stationary phase used are

(a) Size exclusion chromatography and polar stationary phase

(b) Size exclusion chromatography and non-polar stationary phase

(c) Affinity chromatography and polar stationary phase

(d) Reverse phase chromatography and non-polar stationary phase

44. The characteristic oxygen binding profile of hemoglobin shown below arises due to the
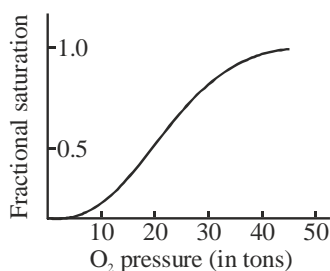
P. Quaternary structure   Q. Subunit dissociation

R. Cooperativity   S. Conformational change

(a) P, Q, R and S   (b) Q, R and S

(c) P, Q and S   (d) P, R and S

45. In some mammalian cells the rate of addition of nucleotide is about 5% of that of *E. coli*. How many replication origins must be present in the mammalian cell containing 3pg of DNA per cell and replicating in 6 hours? (Given the molecular weight of *E.coli* genome is 2×10^9 Da and it takes 40 minutes to replicate the entire *E.coli* genome)

(a) 160   (b) 28   (c) 2004   (d) 3022

46. Glutamic acid enters into the cell through glutamic acid /Na$^+$ symporter, where glutamic acid transported through active transport require metabolic energy, while Na$^+$ ions are absorbed and release energy. Few number of Na$^+$ ions are required to transport so as to provide enough energy required for glutamic acid transport. Calculate the number of Na$^+$ ions are need to be transported to provide the free energy to transport a molecule of glutamic acid from a concentration of 0.1 mM (outside) to the concentration of 20 mM (inside) the cell. (Net charge on glutamic acid is '–1', F (Faraday constant) = 23062 cal/mol, $\Delta\psi$ or V (potential difference across membrane) = –70 mV, Temperature = 37ºC and ln 200 = 5.3, Gas constant R = 1.97 $\cong$ 2cal/mol/k)

(a) 2   (b) 3   (c) 1   (d) 4

47. In scurvy, defective collagen is due to insufficient vitamin C, which

(a) is ordinarily incorporated into cross links between procollagen molecules

(b) is usually involved in the hydroxylation of proline residues

(c) inhibits oxidative degradation of collagen

(d) is required for the conversion of lysyl residues into aldehyde

48. Both Rous sarcoma virus (RSV) and Abelson leukemia virus (ALV) infect and replicate in chicken embryo fibroblasts, but only RSV induces cell transformation, not ALV. From the given statements, find out the most suitable explanation for this

(a) In the RSV DNA, which is of about 10kb in size, has extra gag gene which act as oncogene to transform the cell. ASLV DNA, which is of about 8.5kb contains only one gag gene, mainly responsible for viral replication.

(b) Before infection to the cell, RSV has many protooncogenes, which become oncogenes after infection and cause cell transformation.

(c) RSV contains at least one oncogene (in some cases two) that is not required for virus replication but is responsible for cell transformation. ALV does not contain any such oncogene.

(d) Both have oncogenes in their genome, the oncogenes of RSV are active after infection to cause cell transformation but the oncogenes of ALV become inactivated after cell infection and so not able to cause cell transformation.

49. A 10-year-old boy sprains his ankle while running. History reveals that he has difficulty in running, jumping, and keeping up with other children in races. His mother reports that she is also clumsy. Physical examination demonstrates foot drop, weakness, sensory loss, and reduced reflexes. The boy is found to have a decrease in nerve conduction velocity and an X-linked mutation of connexin 32, consistent with Charcot-Marie-Tooth (CMT) disease. The neuropathy and gait disorder result because connexin is an important component of which of the following?

(a) Gap junction   (b) Tight Junction

(c) Septate junction   (d) Microtubule

50. There are certain drugs to perturb the cytoskeleton. Match the drug with its source and affects

Drug	Source	Affect
1. Taxol	(i) Periwinkle plant	p. Sequesters actin monomers
2. Vincristine	(ii) Red sea sponge	q. Binds and stabilizes assembled microfilaments
3. Latrunculin	(iii) Pacific yew tree	r. Stabilizes microtubules
4. Phalloidin	(iv) Death cap fungus	s. Aggregates tubulin heterodimers

(a) 1- iii- r, 2- i- s, 3-ii- p, 4-iv-q
(b) 1-iii- r, 2-ii-s, 3- i- p, 4- iv- q
(c) 1-ii-r, 2- iii- s, 3-i- p, 4- iv- q
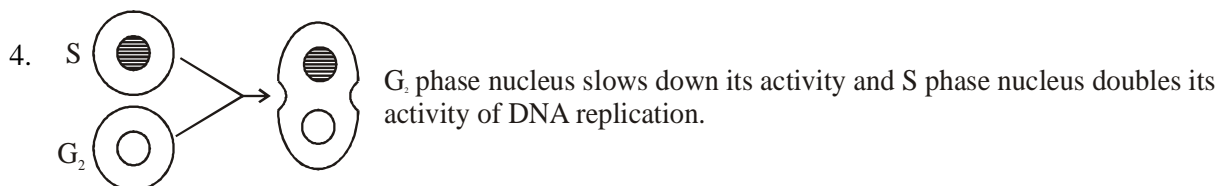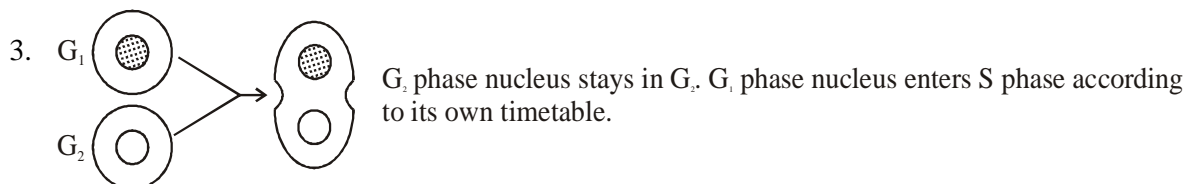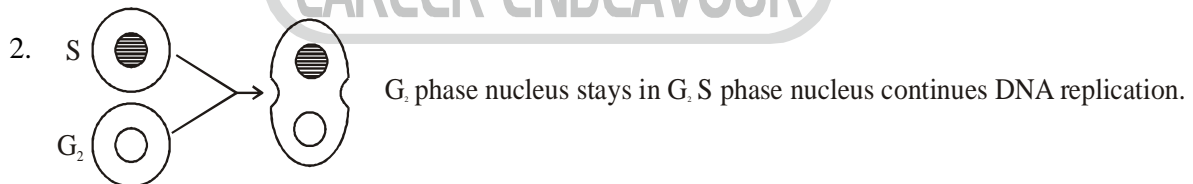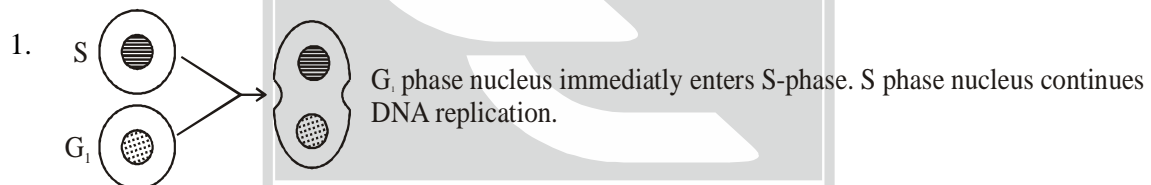(d) 1- iii- r, 2-iv- q, 3- ii- p, 4- i- s

51. Nitric oxide couples G protein linked receptor stimulation in endothelial cells to relaxation of smooth muscle cells in blood vessels. Given below are certain statements regarding nitric oxide signaling.
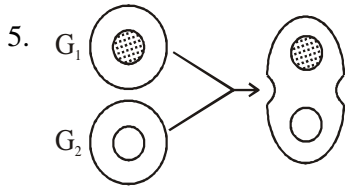
1. Nitric oxide (NO), a toxic, short lived gas molecule produced by the enzyme NO synthase, which converts the amino acid citruline to NO and arginine.

2. Nitric oxide (NO), a toxic, short lived gas molecule produced by the enzyme NO synthase which converts the amino acid arginine to NO and citruline.

3. Inside the smooth muscles cells NO activates guanylyl cyclase, which increases cGMP concentration activates a protein-protein kinase-G which induces muscle contraction by catalyzing the phosphporylation of the appropriate muscle proteins.

4. The receptor of NO is extracellular in the smooth muscle cell, which is coupled do the guanylyl cyclase.

Select out the wrong statements

(a) only 2 (b) 1 and 4 (c) 1, 3, 4 (d) 2, 3, 4

52. Results of fusion of 2 cells of different phase of cell cycle. Find the combination of correct results after fusion.

1. G_1 phase nucleus immediatly enters S-phase. S phase nucleus continues DNA replication.

2. G_2 phase nucleus stays in G_2 S phase nucleus continues DNA replication.

3. G_2 phase nucleus stays in G_2. G_1 phase nucleus enters S phase according to its own timetable.

4. G_2 phase nucleus slows down its activity and S phase nucleus doubles its activity of DNA replication.
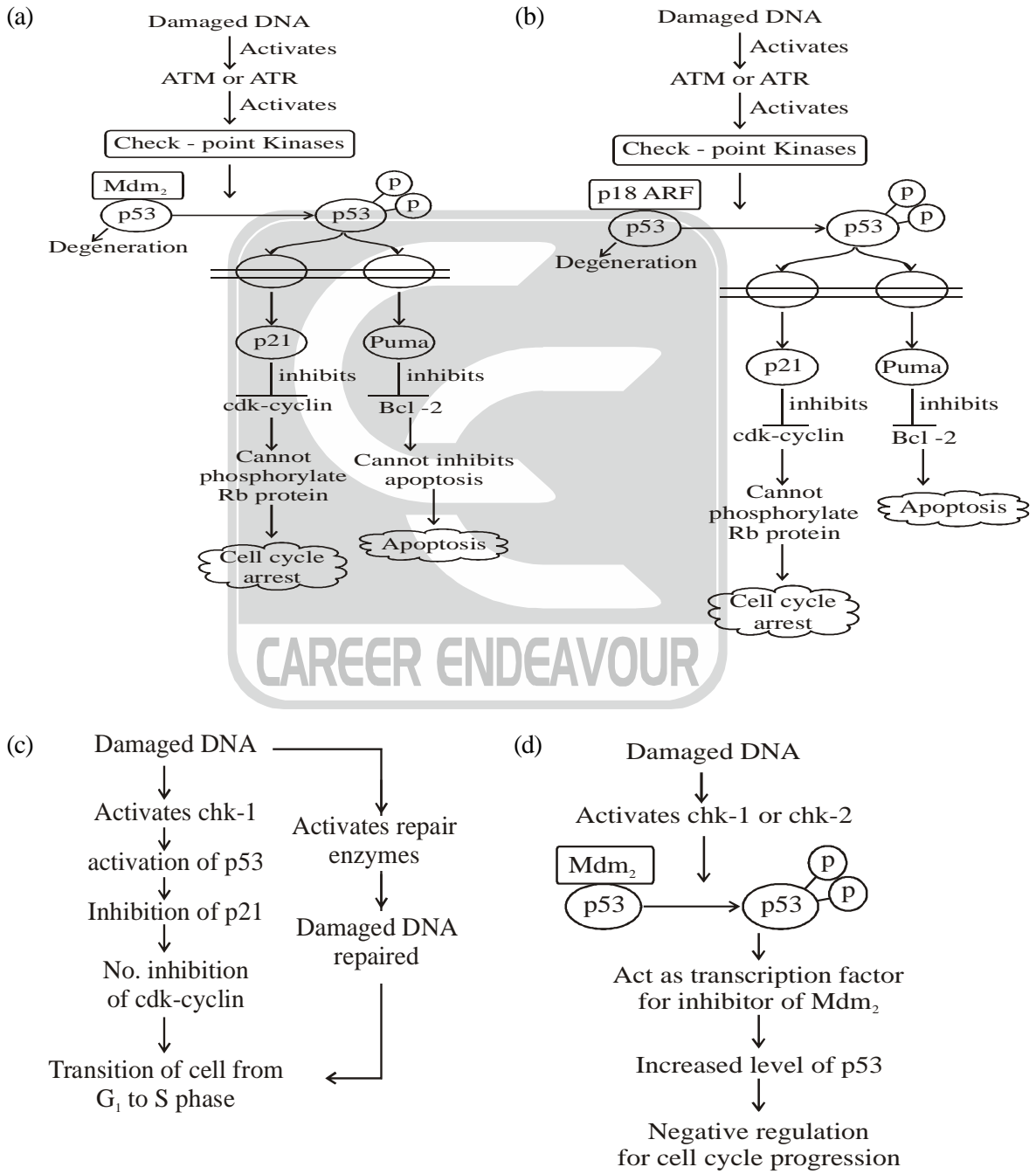
5.

G_2 phase nucleus stays in G_2. G_1 phase nucleus skips S phase and immediately enters to G_2 phase.

(a) only 1 and 2   (b) 1, 2, 3   (c) 1, 3 and 4   (d) 2, 4 and 5

53. Following figures illustrate the role of p53 protein in responding to DNA damage. Identify the correct one ?

(a) Damaged DNA → Activates → ATM or ATR → Activates → Check - point Kinases → p53 (Mdm₂ → p53 → Degeneration); p53 with P, P → p21 (inhibits cdk-cyclin → Cannot phosphorylate Rb protein → Cell cycle arrest), Puma (inhibits Bcl -2 → Cannot inhibits apoptosis → Apoptosis)

(b) Damaged DNA → Activates → ATM or ATR → Activates → Check - point Kinases → p53 (p18 ARF → p53 → Degeneration); p53 with P, P → p21 (inhibits cdk-cyclin → Cannot phosphorylate Rb protein → Cell cycle arrest), Puma (inhibits Bcl -2 → Apoptosis)

(c) Damaged DNA → Activates chk-1 → activation of p53 → Inhibition of p21 → No. inhibition of cdk-cyclin → Transition of cell from G_1 to S phase; Damaged DNA → Activates repair enzymes → Damaged DNA repaired → Transition of cell from G_1 to S phase

(d) Damaged DNA → Activates chk-1 or chk-2 → p53 (Mdm₂ → p53) → p53 with P, P → Act as transcription factor for inhibitor of Mdm₂ → Increased level of p53 → Negative regulation for cell cycle progression

54. Insulin dependent diabetes mellitus is an auto-immune disorder. During its onset IFN-γ production in pancreatic islets increases that leads to development of inflammation and subsequent destruction of β-cells. It ceases insulin production and causes diabetes to set in.

    You want to design a transgenic mice for it. In this mice, it is must that IFN-γ must only be over expressed in pancreatic islets. Which among the following will be the best strategy to develop such transgenic mice?

    (a) Place IFN-γ gene upstream of a viral promoter

    (b) Place IFN-γ gene upstream of insulin promoter

    (c) Place IFN-γ gene downstream of a viral promoter

    (d) Place IFN-γ gene downstream of insulin promoter

55. Given below are various members of plant kingdom and their evolution. At various steps, new traits were introduced. These traits are named A, B, C and D.
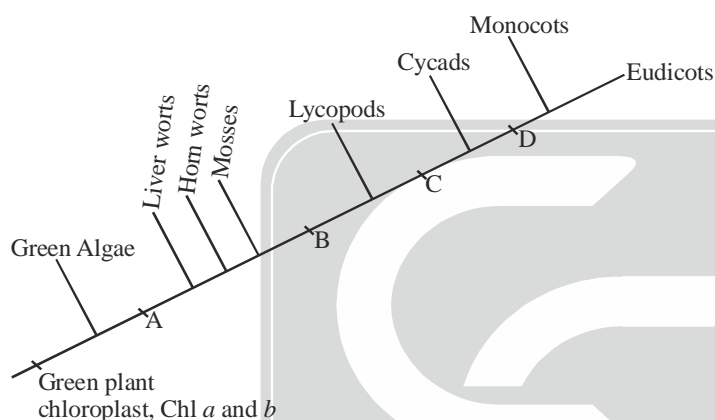
    Give the correct options which represent A, B, C and D accurately

    (a) A-Double fertilization, B-Seed, C-Vascular tissue, D-Embryo

    (b) A-Embryo, B-Vascular tissue, C-Seed, D-Double fertilization

    (c) A-Seed, B-Vascular tissue, C-Embryo, D-Double fertilization

    (d) A-Vascular tissue, B-Embryo, C-Seed, D-Double fertilization

56. Match the techniques with their applications:

Technique	Application
1. Edman Degradation	A. Post translational modifications
2. Western Blotting	B. DNA sequencing
3. Real time PCR	C. Protein sequencing
4. Sanger's method	D. Expression analysis at RNA level

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

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

57. The Maxam-Gilbert sequencing method involves chemical modification and cleavage of DNA at specific residues. The lanes A-D in the given gel have cleavage of DNA at bases specified as below.

A-(A+G), B-G, C-C and D- (C+T)

Sequencing Gel
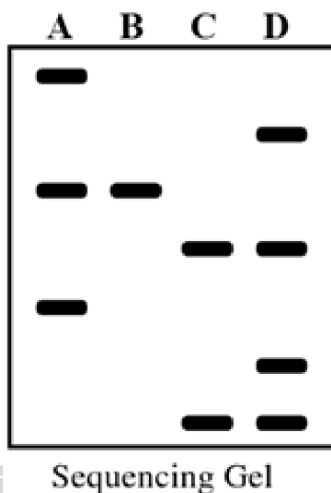
The sequence of DNA 5'-3' is as follows:

(a) ATGCATC   (b) CTACGTA   (c) ATGCACT   (d) TCACGTA

58. The following table lists ligands and their target molecules for affinity chromatography.

Ligand	Target molecule
1. Metal ions	A. Glycoprotein
2. Glutathione	B. Immunoglobulins
3. Lectin	C. Tryptophan on protein surface
4. á-Lactalbumin	D. GST
5. Protein A	E. Galactosyltransferase

The correct combination is:

(a) 1-A, 2-B, 3-C, 4-D, 5-E   (b) 1-A, 2-D, 3-C, 4-E, 5-B

(c) 1-C, 2-D, 3-A, 4-E, 5-B   (d) 1-C, 2-D, 3-E, 4-A, 5-B

59. The following are a few statements about 2-D gel electrophoresis:

1. In a 2-D gel proteins are separated on the basis of confirmation and net charge

2. IEF is separation of proteins on the basis of their net charge

3. At isoelectric point a molecule shows no movement in an electric field

4. SDS helps in focusing of proteins in IEF

The combination with 2 Incorrect and one correct statements is:

(a) 1, 2 and 3   (b) 2, 3 and 4   (c) 1, 2 and 4   (d) None of these.

60. The following are steps in sample preparation for TEM:

A. Embedding using liquid epoxy plastics   B. Dehydration of samples using ethanol

C. Fixation of specimen using glutaraldehyde   D. Staining with Uranyl acetate

E. Sectioning with an ultra-microtome

The correct order of steps is:

(a) ABCDE   (b) CBAED   (c) BCAED   (d) BCADE

Space for Rough Work

CAREER ENDEAVOUR
Best Institute for IIT-JAM, NET & GATE

CSIR-UGC-NET/JRF LIFE SCIENCES
TEST SERIES-2
(Part-A + Biochemistry + Developmental Biology + Taxonomy + Diversity + Cell Biology
+ Human Physiology + Molecular Biology and Recombinant DNA Methods-1
+ Microscopy + Radiolabeling Methods + Biophysical Methods-1)

Date : 24-05-2019

[ANSWER KEY]

PART-A

1. (b)	2. (c)	3. (a)	4. (c)	5. (a)
6. (d)	7. (b)	8. (d)	9. (a)	10. (b)

PART-B

11. (d)	12. (b)	13. (b)	14. (c)	15. (a)
16. (b)	17. (a)	18. (b)	19. (a)	20. (c)
21. (b)	22. (d)	23. (c)	24. (c)	25. (b)
26. (b)	27. (d)	28. (b)	29. (a)	30. (c)
31. (d)	32. (d)	33. (c)	34. (b)	35. (b)

PART-C

36. (d)	37. (b)	38. (a)	39. (b)	40. (d)
41. (c)	42. (b)	43. (d)	44. (d)	45. (c)
46. (a)	47. (b)	48. (c)	49. (a)	50. (a)
51. (c)	52. (b)	53. (a)	54. (d)	55. (b)
56. (c)	57. (b)	58. (c)	59. (c)	60. (b)