

# TEST SERIES CSIR-NET/JRF JUNE 2019

## BOOKLET SERIES **C**

Paper Code **03**

Test Type: **TEST SERIES**

### LIFE SCIENCES

Duration: 2:00 Hours

Date: 30-05-2019

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.



**CAREER ENDEAVOUR**

Best Institute for IIT-JAM, NET & GATE

**CORPORATE OFFICE :**

33-35, Mall Road, G.T.B. Nagar,  
Opp. G.T.B. Nagar Metro Station  
Gate No. 3, Delhi-110 009

T : 011-27653355, 27654455

[www.careerendeavour.com](http://www.careerendeavour.com)

**REGISTERED OFFICE :**

28-A/11, Jia Sarai, Near IIT  
Metro Station, Gate No. 3,  
New Delhi-110 016

T : 011-26851008, 26861009

E : [info@careerendeavour.com](mailto:info@careerendeavour.com)

For Online Test

[www.careerendeavouronlinetest.com](http://www.careerendeavouronlinetest.com)



DOWNLOAD CAREER ENDEAVOUR APP

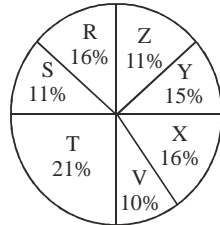


## PART-A

1. Three men, four women and six children can complete a work in seven days. A woman does double the work a man does and a child does half the work a man does. How many women alone can complete this work in 7 days ?  
 (a) 7 (b) 9 (c) 12 (d) 0

2. Study the following pie-chart and the table and answer the question based on them.

## PERCENTAGE OF POPULATION OF SEVEN VILLAGES IN 1997



Village	% Population Below Poverty Line
X	38
Y	52
Z	42
R	51
S	49
T	46
V	58

Find the population of village *S* if the population of village *X* below poverty line in 1997 is 12160.

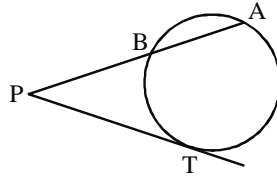
- (a) 18500 (b) 20500 (c) 22000 (d) 26000
3. It takes eight hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the car is  
 (a) 2 : 3 (b) 3 : 2 (c) 3 : 4 (d) 4 : 3
4. If in a certain language 'GIVE' is coded as 'FWJH' and 'TAKE' is coded as 'FLBU', then in the same language code for 'MINE' is  
 (a) NOJM (b) NOJN (c) FOJN (d) FONJ
5. The average temperature of the town in the first four days of months was 58 degrees. The average for the second, third, fourth and fifth days was 61 degrees. If the temperatures of the first and fifth days were in the ratio 7 : 8, then what is the temperature on the fifth day ?  
 (a) 68 degrees (b) 60 degrees (c) 96 degrees (d) 80
6. Find the length of canvas 1.25 m wide required to build a conical tent having base radius 7 metres and height 24 metres.  
 (a) 200 (b) 440 (c) 400 (d) 308
7. In the series given below follows a certain pattern. What should come following the same pattern in place of question mark (?) ?

8	4	4	6	12	?
---	---	---	---	----	---

- (a) 24 (b) 18 (c) 26 (d) 30
8. D is mother of B.  
 C and E are married couple.  
 A and F are brothers.  
 A and D are married couple.  
 C is father of D.  
 How is D related to F ?  
 (a) Wife (b) Sister (c) Sister-in-law (d) Aunt
9. A brokers commission is 5 % on all sales upto ` 10,000 and 4 % on all sales exceeding ` 10,000 . He gives ` 31,100 to the owner. What is the total sales ?  
 (a) ` 33,000 (b) ` 32,500 (c) ` 34,200 (d) ` 33,100



10. If in the figure given below, PBA is a secant and PT is a tangent having a length of 6 cm and PA = 9 cm, then what is the length of AB in cm ?



- (a) 4                      (b) 3                      (c) 5                      (d) 6

### PART-B

11. The herbicide, DCMU is responsible for the inhibition of which of the following?  
 (a) Transport of electrons from P700 to ferredoxin  
 (b) Transport of electrons from P680 to P700  
 (c) Transport of electrons from plastocyanin to P700  
 (d) Transport of electrons from oxygen evolving complex to P680
12. Tropism is best described as  
 (a) Movement related to stimulus  
 (b) Rotary or helical movements of plant organs  
 (c) Inherent directional movement of plants  
 (d) Directional movement of plants related towards or away from stimulus
13. Which of the following are synthesized by mevalonic acid pathway and composed of isoprene units?  
 (a) Alkaloids                      (b) Terpenoids                      (c) Phenolics                      (d) All of the above
14. Bergmann's rule describes the increase in body size observed in related organisms as we go from the equator to the poles. Which of the following is a possible explanation for this pattern?  
 (a) Decreased body mass in smaller organisms helps generate less heat  
 (b) Decreased surface area to volume ratios in larger organisms helps conserve heat  
 (c) Increased body mass in the poles is necessary to counter increased competition  
 (d) Increased surface area in larger organisms helps efficient gas exchange in the poles
15. Which of the following is NOT an example of cooperative behaviour?  
 (a) Biofilm formation                      (b) Lek formation  
 (c) Reproductive division of labour                      (d) Sentinel behavior
16. The order of basic processes involved in succession is  
 (a) Nudation->Invasion-> competition and co action->reaction->stabilization  
 (b) Nudation->stabilization-> competition and co action->Invasion->reaction  
 (c) Invasion->Nudation->competition and co action->Reaction->stabilization  
 (d) Invasion->stabilization-> competition and co action->Reaction->nudation
17. The gradual physiological adjustment to slowly changing new environmental conditions is known as  
 (a) Selection                      (b) Introduction  
 (c) Acclimatization                      (d) Quarantine
18. A non-venomous, non-toxic species of reptile is brightly coloured and closely resembles a venomous reptile species in the same habitat. This is most likely a case of  
 (a) Aggressive mimicry                      (b) Batesian mimicry  
 (c) Masquerade                      (d) Müllerian mimicry



19. Females in many birds and mammals mate with multiple males, in addition to their paired- male. Which of the following is an INCORRECT adaptive explanation for such extra-pair mating?
- (a) Increased genetic quality of offspring (b) Increased care of offspring by the paired-male  
(c) Increased probability of fertilisation (d) Increased resources for offspring production
20. According to the Hamilton-Zuk hypothesis, females prefer males with the most elaborate ornaments because those ornaments signal parasite resistance. Which of the following is NOT an assumption of this hypothesis?
- (a) Parasites reduce male fitness  
(b) Parasite resistance is indicated by male ornamentation  
(c) Parasite resistance is genetic  
(d) Parasite load is positively correlated with male ornamentation
21. A small isolated population is more likely to undergo speciation than a large population because, compared to the large population, the small population:
- (a) has greater genetic diversity (b) has a higher mutation rate  
(c) is more affected by genetic drift (d) is more susceptible to gene flow
22. In the selection of bacterial colonies that carry cloned DNA in plasmids, such as pBR<sup>322</sup>, that contain two antibiotic resistance genes.
- (a) Both antibiotic resistance genes are functional in the desired bacterial colonies.  
(b) Radio labeled DNA or RNA probes play a role.  
(c) Untransformed bacteria are antibiotic resistant.  
(d) One antibiotic resistance gene is nonfunctional in the desired bacterial colonies.
23. Clinical use for recombinant DNA technology is to have rapidly replicating bacteria produce large amounts of specific proteins (eg-hormones). Expression of a eukaryotic gene in prokaryotes involves.
1. a shine - dalgarno (SD) sequence in mRNA.
  2. absence of introns.
  3. regulatory elements upstream of the gene.
- (a) only 1 (b) 1 and 2 (c) 1 and 3 (d) 1, 2 and 3
24. A PCR mixture has 100 template DNA molecules and the reaction was performed for 10 cycles. How many molecules of the amplicons will be generated ?
- (a)  $1.024 \times 10^4$  (b)  $1.024 \times 10^5$  (c)  $1.024 \times 10^3$  (d) 2000
25. Which of the following restriction enzyme is a blunt end cutter
- (a) EcoRI (b) Bam HI (c) Alu I (d) Hae I
26. Which of the following methods is commonly employed for the isolation of DNA from plant cells
- (a) Phenol chloroform method (b) CTAB method  
(c) Alkaline lysis method (d) Trizol method
27. If IgM was run on an SDS-PAGE in absence of any reducing agent like BME or DTT, how many bands are expected?
- (a) 1 (b) 2 (c) 3 (d) 5
28. During the electrophoresis of DNA, electric field is used for the separation of molecules on an inert support, which of the following statements is correct?
- (a) Gravity has a profound role on separation  
(b) DNA molecules of same size may have different mobility  
(c) DNA moves from anode to cathode  
(d) DNA can never be separated on polyacrylamide gel



29. Which of the following is INCORRECT about isoelectric focusing of proteins.
- It is based on isoelectric point of protein
  - A strip containing a pH gradient is used
  - Protein has no electrophoretic mobility at its pI
  - There may not be two proteins with same isoelectric point
30. A protein was being analysed for a potential post translational modification (PTM) using mass spectrometry. Compared to unmodified form of this protein, the modified form showed mass shift of +80. Which of the following type of modification is most likely.
- Phosphorylation
  - Glycosylation
  - Ubiquitinylation
  - Ribosylation
31. In which year human genome project was completed and first draft was published.
- 1996
  - 2001
  - 2008
  - 2019
32. Outside out patch (OOP) is created by
- Gentle pulling of pipette
  - Quick pulling of pipette
  - Permeabilization of patch
  - No use of pipette
33. Which antibiotic is used in creating a perforated patch clamp method?
- Amphotericin
  - Penicillin
  - Ampicillin
  - Tetracycline
34. UV-vis spectroscopy relies on which of the following electronic transitions
- p to p\* transitions
  - p to p\* transitions
  - n to s\* transitions
  - both a and b
35. Which electronic transitions require highest amount of energy
- n to p\* transitions
  - p to p\* transitions
  - n to s\* transitions
  - s to s\* transitions

### PART-C

36. You collect neem leaves to be dried and made into a powder so you could use them later. When the leaves are dry, they become chipped and brittle and making a powder out of them becomes easy. During this process, which of the following becomes true?
- Their water potential becomes zero
  - Their water potential becomes more negative
  - Their water potential becomes less negative
  - Their water potential is more than zero
37. Which of the following is true for C<sub>4</sub> plants?
- The leaves of C<sub>4</sub> plants have Kranz anatomy which differentiate between mesophyll and bundle sheath cells
  - PEP carboxylase is present in bundle sheath cells
  - Rubisco is present in bundle sheath cells
  - CO<sub>2</sub> is re-fixed through Calvin cycle in the bundle sheath cells
- The correct options are
- A, B, C
  - A, B
  - A, C, D
  - A only



38. Match the phytohormones in Column-I to their physiological roles in Column-II.

**Column-I****Column-II**

- |                 |                                  |
|-----------------|----------------------------------|
| P. Ethylene     | (i) Polar transport              |
| Q. Cytokinin    | (ii) Removal of seed dormancy    |
| R. Gibberellins | (iii) Delayed leaf senescence    |
| S. Auxin        | (iv) Epinastic bending of leaves |

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

39. For a species, assuming a relatively short time scale and no evolution, increased interspecific competition will result in a

- |                               |                            |
|-------------------------------|----------------------------|
| (a) larger fundamental niche  | (b) larger realized niche  |
| (c) smaller fundamental niche | (d) smaller realized niche |

40. To estimate the number of foxes in an area, a researcher conducted a mark-recapture survey. In the first survey, he caught and marked 90 foxes. In his second survey a week later, he caught 120 foxes of which 40 were marked (recaptures). If you are told that the actual number of foxes in this area is 400, which of the following is a plausible explanation for the anomaly in the researcher's data?

- (a) Capture increased mortality in the marked foxes  
 (b) Large mortality of foxes between the two surveys  
 (c) The marked foxes were more likely to avoid recapture  
 (d) The marked foxes were more likely to be recaptured

41. Birds show much variation in sexual size dimorphism (body size differences between males and females), which is hypothesized to be associated with their mating system. Match the two groups below to reflect the expected pattern in mating system and sexual size dimorphism in birds. Mating system Size dimorphism

- |  |                                      |
|--|--------------------------------------|
| i. Monogamy (1 male and 1 female)        | P. Males larger than females         |
| ii. Polygyny (1 male and many females)   | Q. Females larger than males         |
| iii. Polyandry (1 female and many males) | R. Males and females similar in size |
| (a) i – Q; ii – P; iii – R               | (b) i – R; ii – P; iii – Q           |
| (c) i – P; ii – R; iii – Q               | (d) i – R; ii – Q; iii – P           |

42. Primary succession refers to the sequence of changes in plant communities at a newly formed habitat. Species establishing first at the newly formed habitat (pioneer species) show characteristics that are different from those in species that establish later in the community. Which of the following represents the predicted characteristics of pioneer species?

- (a) Large dispersal distance, high fecundity, low competitive ability, short lifespan  
 (b) Short dispersal distance, high fecundity, high competitive ability, short lifespan  
 (c) Large dispersal distance, high fecundity, high competitive ability, long lifespan  
 (d) Short dispersal distance, low fecundity, high competitive ability, long lifespan

43. Most terrestrial ecosystems have a pyramidal structure of standing biomass across trophic levels where biomass of producers > primary consumers > secondary consumers > tertiary consumers. However, some aquatic ecosystems have an inverted pyramidal structure where the standing biomass of producers < primary consumers. An explanation for this is:

- (a) greater efficiency of primary consumers in aquatic ecosystems  
 (b) high turnover rates of aquatic producers relative to consumers  
 (c) low nutrient concentrations in aquatic ecosystems  
 (d) very high light limitation in aquatic ecosystems





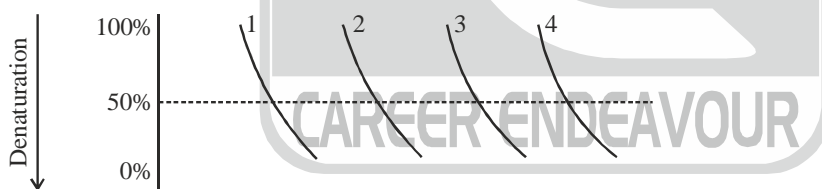
44. Which of the following is an example of complete intrinsic post-zygotic reproductive isolation between two species P and Q?
- P and Q can mate and have fertile offspring
  - P and Q can mate but their offspring are inviable
  - P and Q have breeding seasons during different times of the year
  - P and Q have different courtship behavior
45. The rates of non-synonymous and synonymous change per site are  $dN$  and  $dS$  respectively. Which of the following mechanisms explains the evolution of a gene with  $dN/dS = 0.2$ ?
- Diversifying selection
  - Neutral evolution
  - Positive selection
  - Negative selection
46. Which of the following assumptions allows us to use molecular clocks to estimate species divergence times?
- Adaptive changes accumulate at a constant rate
  - Adaptive changes occur episodically
  - Neutral changes accumulate at a constant rate
  - Neutral changes occur episodically
47. The purpose of the gene therapy is to introduce a normal gene into cells containing a defective gene. The first authorised human gene therapy was given to a 4 year old girl with adenosine de-aminase deficiency (ADA). ADA children have a severe combined immuno deficiency (SCID) and usually dies within the first few years from overwhelming infections. A modified retrovirus was constructed to contain the human ADA gene which could be expressed in human cells without replication of the virus. The child's isolated T cells were infected with the retroviruses to transfer the normal gene to them. The modified T cells were reintroduced into the patient. The girl is now 12 years old & doing well. Expression of recombinant genes in mammalian cells :
- Will not occur if the gene contains an intron.
  - Occurs most efficiently if c-DNA is used in the vector.
  - Does not require that the vector have an origin of replication.
  - Requires that the vector have enhances and promoter elements engineered into the vector.
48. A double stranded DNA is sequenced as -  
 5' ATCGCCCGGGCAAGATCACCCGGGACAC 3'  
 3' TAGCGGGCCCGTTCTAGTGGGCCCTGAG 5'
- A scientist gave a task to his student for partial restriction digestion of this known DNA sequence by SmaI restriction endonuclease, then which of the following sequence could be the result of partial digestion ?
- 5'ATCGCCCGGGCAAGA3' and 5'TCACCCGGGACAC3'  
 3'TAGCGGGCCCGTTCT5'      3'AGTGGGCCCTGAG5'
  - 5'ATCGCCC3' and 5'GGGCAAGATCACCC3' and 5'GGGACAC3'  
 3'TAGCGGG5'      3'CCCGTTCTAGTGGG5'      3'CCCTGTG5'
  - 5'ATCGCCCGGGCAAGATCACCC3' and 5'GGGACAC3'  
 3'TAGCGGGCCCGTTCTGAGTGGG5'      3'CCCTGAG5'
  - 5'ATCGCCCGGGCAAGATCACCCGGGACAC3'  
 3'TAGCGGGCCCGTTCTAGTGGGCCCTGAG5'
- Only 1
  - only 2
  - 2 and 3
  - 2, 3 and 4



49. *Agrobacterium tumefaciens* is a soil microorganism that causes crown gall disease in many species of plants. Crown gall occurs when a wound on the stem allows *A. tumefaciens* bacteria to invade the plant. After infection the bacteria causes a cancerous proliferation of the stem tissue in the region of the crown. Read the following statement carefully and find out the correct ones.
1. *A. tumefaciens* infect only dicotyledonous plants, monocots are outside of the normal host range.
  2. *A. tumefaciens* infect only monocotyledonous plants, dicots are outside of the normal host range.
  3. The ability to cause crown gall disease is associated with the presence of the Ti plasmid with the bacterial cell.
  4. The ability to cause crown gall disease is associated with the genes present on the main bacterial chromosome.
  5. T-DNA of the Ti plasmid contains 8 or so genes that are expressed in the plant cells and are responsible for the cancerous properties of the transformed cells.
  6. T-DNA of the Ti plasmid contains 8 or so genes that are expressed in bacterium for its easy transport to plant.
- (a) 1, 3, 6                      (b) 1, 3, 5                      (c) 2, 3, 5                      (d) 1, 4, 6

50. Human genome is approximately  $3 \times 10^9$  bp large, if the whole genome is completely digested with an enzyme EcoRI, having restriction site G/AATC the approximate number of fragments generated with approximate size would be
- (a)  $7.3 \times 10^5$  fragments with average size 4.09 kb
  - (b) 30,000 fragments with average size  $10^5$  bp
  - (c) 90,000 fragments with average size  $3 \times 10^4$  bp
  - (d) No fragments as human genome does not have any EcoRI site

51. Consider the following figure about various DNA molecule of different complexity, as obtained after complete denaturation followed by renaturation analysis a graph between fraction renatured, and product of DNA conc. ( $C_0$ ) and time required for its renaturation was plotted.

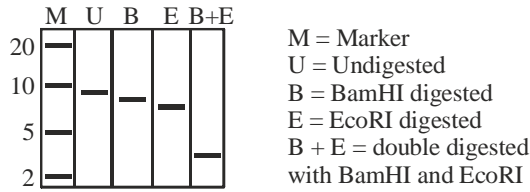


Which of the following DNA type is correct match for curve type.

- (a) 1-Repeated DNA (AT repeats)      2-Archaeal DNA      3-Bacterial DNA      4-Human DNA
  - (b) 1-Human DNA      2-Bacterial DNA      3-Archaeal DNA      4-Repeated DNA (AT repeats)
  - (c) 1-Archaeal DNA      2-Human DNA      3-Bacterial DNA      4-Repeated DNA
  - (d) 1-Repeated DNA      2-Human DNA      3-Archaeal DNA      4-Bacterial DNA
52. A DNA molecule was being used for genetic engineering experiment. The size of DNA was 10 kb, and it was known to contain one EcoRI site and one BamBI site, A student was curious to know that if the DNA was linear or circular, he performed double digestion, and single digestion with each enzyme. Following results were obtained.







The correct map of DNA is



53. A number of DNA modifying enzymes are used in DNA manipulation for various application, consider the following pairs. Stating the name of enzymes and their biological role in genetic engineering.

**Enzyme**

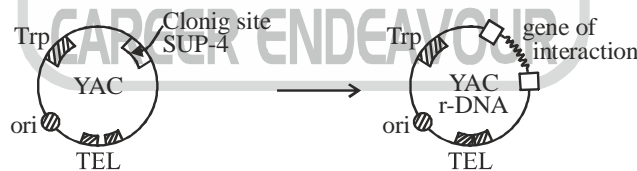
- A. Mung bean nuclease  
 B. Polynucleotidyl kinase  
 C. Alkaline phosphatase  
 D. Klenow fragment

**Function**

- (i) Prevention of self ligation  
 (ii) Nick filling and labeling  
 (iii) End labeling  
 (iv) Removal of sticky ends

The correct match for the above feature is

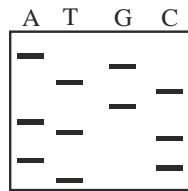
- (a) A-(i), B-(ii), C-(iii), D-(iv)  
 (b) A-(iv), B-(iii), C-(i), D-(ii)  
 (c) A-(iv), B-(iii), C-(ii), D-(i)  
 (d) A-(iv), B-(ii), C-(iii), D-(i)
54. A gene was supposed to be cloned in a vector band on yeast plasmid  $2\mu$  circle and chromosomal components if the gene was cloned within SUP-4 region of cloning vector as shown in the figure below.



A genetic engineer now wish to select the positive recombinants containing the recombinant DNA, he used an ade 2-1 mutant as host and screening was done band on activity of SUP, gene that encode for a suppressor t-RNA which suppresses the outcome of ade 2-1 mutation. Which of the following statements is correct.

- (a) The recombinant colonies would be red in colour and other will be white  
 (b) The recombinant colonies would be white in colour and other will be red  
 (c) Only recombinant yeast would grow other would die  
 (d) All of the above

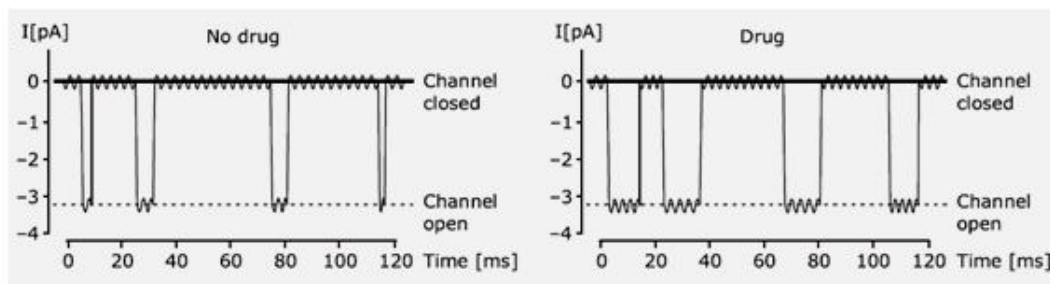
55. Consider the autoradiograph obtained after DNA sequencing using chain termination method developed by F. Sanger.



If ssDNA was used in the sequencing

The sequence of DNA molecule used for sequencing would be

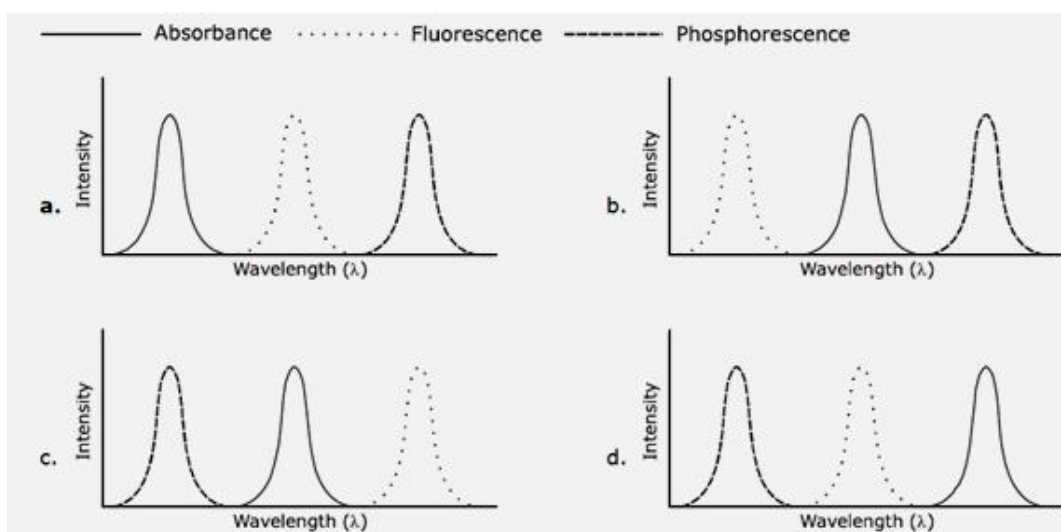
- (a) 5'TCACTAGCTGA3' (b) 3'TCACTAGCTGA5'  
 (c) 5'TCAGCTACTGA3' (d) 3'AGTGGATCGACT5'
56. Consider following methods for the analysis of gene expression  
 P. Microarray Q. RNAseq by next gen sequencing  
 R. Real time PCR S. Northern blotting
- Which of the aforesaid methods are high throughput methods for gene expression analysis of cancer cells in comparison to normal cells.  
 (a) P and Q (b) Q and S (c) P and S (d) P, Q and R
57. Which of the following statements is true about ECG?  
 (a) Electrocardiograph is name of machine  
 (b) Electrocardiograph is the pattern of heart activity  
 (c) Number of leads and electrodes is equal in ECG  
 (d) One electrode is placed on the forehead
58. A compound isolated from a wild plant name "chandani" was used to study a channel in the plasma membrane of human epidermal cells using cell attached patch clamp. Following experimental observations were made:



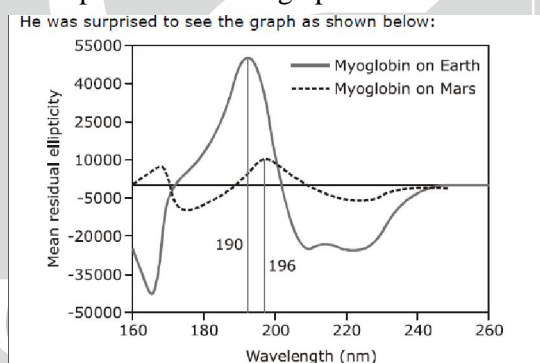
Which of the following conclusions can be made?

- (a) Drug increased the duration of channel opening.  
 (b) Drug increased the frequency of channel opening.  
 (c) Drug decreased the duration of channel opening.  
 (d) Drug decreased the frequency of channel opening.

59. Which of the following set of diagrams correctly represents the order of absorbance, fluorescence and phosphorescence, if the molecules had identical excitation spectrum?



60. In a recent mission of ISRO to Mars named “Man to Mars” a researcher named Chintukla was fortunate to get opportunity to visit the Mars. He took some myoglobin sample with him to the Mars and after reaching, he was assigned to study the conformational change in protein of myoglobin during day hours using circular dichroism. He was surprised to see the graph as shown below:



What inference can he would have drawn from the given data?

- (a) Myoglobin was alpha helical on Earth and turn to beta sheet on Mars.  
 (b) Myoglobin was beta sheet on Earth and turned to alpha helix on Mars.  
 (c) There was no change in conformation but it simply got denatured in martian condition.  
 (d) The martian environment caused chemical modification in amino acids leading to an unique CD spectra.

---

**Space for Rough Work**





## CSIR-UGC-NET/JRF LIFE SCIENCES TEST SERIES-3

(Part-A + Plant Physiology + Ecology + Evolution + Recombinant DNA Technology  
+ Molecular Biology and Recombinant DNA Methods-2 + Biophysical Methods-2  
+ Electrophysiological Methods)

Date : 30-05-2019

### [ANSWER KEY]

#### PART-A

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

#### PART-B

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

#### PART-C

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

