

**ENTRANCE TEST 2021  
NMDCAT REPEATERS  
TEST # 35  
BIOLOGY**

- Q.1 Recombinant DNA technology is popularly known as:**  
 A) Biotechnology  
 B) Gene therapy  
 C) Genetic engineering  
 D) Nanobiotechnology
- Q.2 The DNA molecule to which the gene of interest is integrated for cloning is called:**  
 A) Template  
 B) Transformer  
 C) Carrier  
 D) Vector
- Q.3 Infection caused by a bacterium containing pSC101 cannot be controlled by:**  
 A) Penicillin  
 B) Ampicillin  
 C) Neomycin  
 D) Tetracycline
- Q.4 The transgenic animals are those which have:**  
 A) Foreign DNA in some of its cells  
 B) Foreign DNA in all of its cells  
 C) Foreign RNA in some of its cells  
 D) Foreign RNA in all of its cells
- Q.5 Given below is a sample of a portion of DNA strand giving the base sequence of the opposite strands. What is so special shown in it?**  
 5' \_\_\_\_\_ GAATC \_\_\_\_\_ 3'  
 3' \_\_\_\_\_ CTTAAG \_\_\_\_\_ 5'
- A) Replication completed  
 B) Deletion mutation  
 C) Start codon at the 5' end  
 D) Palindromic sequence of base pairs
- Q.6 Lambda phage is a:**  
 A) Bacterial virus  
 B) Virus  
 C) Prion  
 D) Bacterium
- Q.7 It does not replace gene cloning:**  
 A) DNA sequencing  
 B) PCR  
 C) Gel electrophoresis  
 D) Gene therapy
- Q.8 A method of amplification or copying DNA fragments that is faster than cloning is called:**  
 A) Gel electrophoresis  
 B) DNA analysis  
 C) Gene sequencing  
 D) Polymerase chain reaction
- Q.9 The use of a natural biological system to produce a product or to achieve an end desired by humans is called:**  
 A) Recombinant DNA technology  
 B) Molecular biology  
 C) Biotechnology  
 D) Biochemistry
- Q.10 First restriction enzyme was isolated by:**  
 A) Kary B. Mullis  
 B) Hamilton O. Smith  
 C) Maxam Gilbert  
 D) J. Craig Venter
- Q.11 The phage commonly used as a vector in genetic engineering is:**  
 A) Gamma phage  
 B) T<sub>2</sub>-phage  
 C) T<sub>4</sub>-phage  
 D) Lambda phage
- Q.12 Fragments of DNA from two different species such as bacterium and mammal spliced together into the laboratory into a single molecule called:**  
 A) Recombinant DNA  
 B) Hybrid DNA  
 C) Transgenic DNA  
 D) Mutated DNA
- Q.13 Bacterial cells take up recombinant plasmid if they are treated with \_\_\_\_\_ to make them more permeable:**  
 A) Sodium chloride  
 B) Calcium chloride  
 C) Potassium chloride  
 D) Cesium chloride
- Q.14 Restriction enzyme *EcoR*<sub>1</sub> cuts DNA to produce:**  
 A) Blunt ends  
 B) Non-palindromic ends  
 C) Sticky ends  
 D) Split ends

- Q.15** \_\_\_\_\_ acts as an ideal expression system in recombinant DNA technology.  
 A) Retrovirus  
 B) Rotavirus  
 C) Algae  
 D) Bacteria
- Q.16** During PCR, in order to open double helix of DNA, it is heated for \_\_\_\_\_ minute/s:  
 A) 01  
 B) 02  
 C) 03  
 D) 04
- Q.17** The technique of insertion of desired genes into the eggs of animals is called:  
 A) Embryonic stem cell mediated transfer  
 B) Retro-virus mediated gene transfer  
 C) Microinjection  
 D) Virus or vector mediated transfer
- Q.18** In PCR fingerprinting technique after digestion of DNA there comes:  
 A) Application of probe  
 B) Blotting of DNA on membrane  
 C) Gel electrophoresis  
 D) Autoradiography
- Q.19** DNA replication occurs over and over again without translation in:  
 A) Recombinant DNA technology  
 B) Polymerase chain reaction  
 C) DNA finger printing  
 D) Gene sequencing
- Q.20** \_\_\_\_\_ used in PCR is analogous to \_\_\_\_\_ used in DNA replication:  
 A) High temperature, Helicase  
 B) High temperature, Polymerase  
 C) Low temperature, Helicase  
 D) *Taq* polymerase, Ligase
- Q.21** The plasmid pBR322 has antibiotic resistance genes for:  
 A) Tetracycline and Doxycycline  
 B) Streptomycin  
 C) Doxycycline and Ampicillin  
 D) Ampicillin and Tetracycline
- Q.22** By PCR we means:  
 A) Polymerase chronic reaction  
 B) Polymerase chain reaction  
 C) Polymerase copy reaction  
 D) Polymerase cross reaction
- Q.23** Dideoxynucleoside triphosphates are used to:  
 A) Start DNA synthesis at different sites  
 B) Terminate DNA synthesis at different sites  
 C) Southern blotting  
 D) Carry out gel electrophoresis
- Q.24** DNA fragments are:  
 A) Negatively charged  
 B) Neutral  
 C) Positively charged  
 D) Either positively or negatively charged depending on their size
- Q.25** Which one of the following is incorrectly matched?  
 A) RFLPs – DNA finger printing  
 B) DNA polymerase - PCR  
 C) Gene therapy – Cure genetic disorders  
 D) DNA ligase – Gel electrophoresis
- Q.26** Agarose extracted from sea weeds is used in:  
 A) Spectrophotometry  
 B) Tissue culture  
 C) PCR  
 D) Gel electrophoresis
- Q.27** During gel electrophoresis DNA fragments are separated according to the following parameters, EXCEPT:  
 A) Their lengths  
 B) Their composition  
 C) Their molecular weights  
 D) Their sizes
- Q.28** For gene therapy of cystic fibrosis:  
 A) Liposomes are bombarded in nostrils  
 B) Solution is sprayed in nostrils  
 C) Liposomes are injected in nostrils  
 D) Solution is injected in nostrils
- Q.29** Free living organisms in the environment that have had a foreign gene stably inserted into them are called:  
 A) Hybrid organisms  
 B) Wild organisms  
 C) Transgenic organisms  
 D) Cisgenic organisms
- Q.30** In cystic fibrosis, liposomes-microscopic vesicles are used which are coated with  
 A) Healthy gene  
 B) Chromosome  
 C) Protein  
 D) Carbohydrate
- Q.31** Recombinant DNA technology is used to produce bacteria that reproduce in large vats called:  
 A) Biovessels  
 B) Biosynthesizers  
 C) Bioproducers  
 D) Bioreactors



- Q.32 Some corn and cotton plants are both \_\_\_\_\_ and \_\_\_\_\_ resistant:**  
 A) Pollution, Cold  
 B) Pollution, Temperature  
 C) Pest, Fungicide  
 D) Pest, Herbicide
- Q.33 Cystic fibrosis affects which one of the following cells of the body?**  
 A) Epithelial cells  
 B) Endothelial cells  
 C) Plasma cells  
 D) Blood cells
- Q.34 The insertion of genetic material into human cell for the cure of genetic disorder is called:**  
 A) DNA finger printing  
 B) Gene therapy  
 C) Gene sequencing  
 D) Gel electrophoresis
- Q.35 Which one of the enzyme is administered to the patients of severe combined immunodeficiency disease (SCID)?**  
 A) Arginase  
 B) Adenosine deaminase (ADA)  
 C)  $\beta$ -galactosidase  
 D)  $\beta$ -lactamase
- Q.36 Liposomes used for gene therapy of cystic fibrosis are coated with the:**  
 A) Proteins  
 B) Carbohydrates  
 C) Nucleic acids  
 D) Lipids
- Q.37 A team of Japanese scientists are attempting to increase the C<sub>4</sub> cycle into the:**  
 A) Sun flower  
 B) Rose  
 C) Soya bean  
 D) Rice
- Q.38 In SCID retroviruses are used to insert normal gene into \_\_\_\_\_ cells during gene therapy:**  
 A) Bone marrow  
 B) Lungs  
 C) Cardiac  
 D) Kidney
- Q.39 Genetic engineering may enhance the ability of \_\_\_\_\_ to extract copper, uranium and gold from low grade sources:**  
 A) Plants  
 B) Bacteria  
 C) Fungi  
 D) Viruses
- Q.40 Use of transgenic farm animals to produce pharmaceuticals is called:**  
 A) Gene pharming  
 B) Gene farming  
 C) Transgenic pharming  
 D) Transgenic farming
- Q.41 Phosphodiester linkage is formed between:**  
 A) Two nucleobases  
 B) Two sugar molecules  
 C) Two phosphates  
 D) Nucleotides and phosphates
- Q.42 It is a technique used in molecular biology to separate charge bearing polymers under the influence of electric field called:**  
 A) DNA sequencing  
 B) Gel electrophoresis  
 C) Microarray  
 D) PCR
- Q.43 It is a technique for correcting defective genes responsible for disease development:**  
 A) Gene therapy  
 B) Cloning  
 C) Tissue culture  
 D) Microarray
- Q.44 Manipulation of DNA in genetic engineering became possible due to the discovery of:**  
 A) Primase  
 B) DNA ligase  
 C) Restriction endonuclease  
 D) *Taq* polymerase
- Q.45 Deficiency of a gene that codes for transmembrane carriers of the chloride ions results in:**  
 A) Cystic fibrosis  
 B) SCID  
 C) Familial hypercholesterolemia  
 D) Parkinson's disease
- Q.46 A method of amplifying or copy DNA fragments that is faster than cloning:**  
 A) Gel electrophoresis  
 B) PCR  
 C) DNA sequencing  
 D) Centrifugation
- Q.47 Following are the possible methods to clone a gene, EXCEPT:**  
 A) Gene sequencing  
 B) Recombinant DNA technology  
 C) PCR  
 D) Polymerase chain reaction
- Q.48 Plants that utilize the \_\_\_\_\_ cycle avoid the inefficiency of carboxylase by using a different means of capturing CO<sub>2</sub>:**  
 A) C<sub>2</sub>  
 B) C<sub>3</sub>  
 C) C<sub>4</sub>  
 D) C<sub>5</sub>

- Q.49 Restriction enzymes hydrolyzed the \_\_\_\_\_ bonds:  
A) Hydrogen  
B) Covalent  
C) Phosphodiester  
D) Peptide
- Q.50 If a person suffers from a fatal heart attack at young age, what would be the suspected cause of death?  
A) Cystic fibrosis  
B) SCID  
C) Hemophilia  
D) Hypercholesterolemia



**ENTRANCE TEST – 2021**

**NMDCAT – CHEMISTRY (Repeaters)**

TEST # 35 UHS TOPIC – 18 + 19 (Organic Chemistry)

TOPICS: CARBOXYLIC ACID AND MACROMOLECULES

- Q.51 All of the following derivatives of carboxylic acids have correct functional group and general formula EXCEPT:**

Opt.	Acid derivatives	Functional group	General formula
A)	Acid halide	-CO - X	R -CO - X
B)	Acid amide	-CO - NH <sub>2</sub>	R -CO - NH <sub>2</sub>
C)	Ester	-CO - OR	R -CO - OR
D)	Acid anhydrides	-CO-CO-	R-CO-CO-R

- Q.52 The acid which is used as ink remover is:**

- A) Oxalic acid  
B) Adipic acid  
C) Succinic acid  
D) Acetic acid

- Q.53 Which of the following statement is incorrect?**

- A) A peptide with two amino acids residues is called dipeptide  
B) A peptide with three amino acids residues is called tripeptide  
C) A peptide with 100 – 1000 amino acids residues is called polypeptide  
D) -CONH<sub>2</sub>- group is called peptide bond

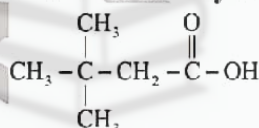
- Q.54 The common name of propane 1,3-dioic is**

- A) Oxalic acid  
B) Malonic acid  
C) Aromatic acid  
D) Fumaric acid

- Q.55 The irritation caused by red ants bite is due to**

- A) Lactic acid  
B) Uric acid  
C) Formic acid  
D) Acetic acid

- Q.56 Consider the following structural formula of carboxylic acid:**



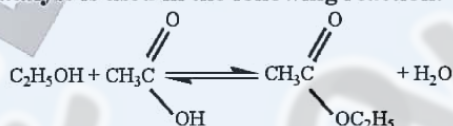
The correct name according to IUPAC is:

- A) 3,3-Dimethylbutanoic acid  
B) 2,2-Dimethylbutanoic acid  
C) 2,3-Dimethylbutanoic acid  
D) 3,2-Dimethylbutanoic acid

- Q.57 The three dimensional twisting and folding of the polypeptide chain results in the \_\_\_\_\_ of proteins.**

- A) Primary structure  
B) Secondary structure  
C) Tertiary structure  
D) Quaternary structure

- Q.58 Which of the following catalyst is used in the following reaction:**



- A) Conc. H<sub>2</sub>SO<sub>4</sub>  
B) Pumice stone  
C) Pt  
D) Ni

- Q.59 Which of the following is correct order of reactivity of carboxylic acids with methanol in ester formation?**

- A) Propanoic acid < ethanoic acid < methanoic acid  
B) Ethanoic acid < propanoic acid < methanoic acid  
C) Propanoic acid < methanoic acid < ethanoic acid  
D) Methanoic acid < propanoic acid < ethanoic acid

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- Q.60 Strength of an acid is determined by the readiness with which they donate a proton. Which of the following statements is incorrect regarding strength of carboxylic acids:**  
 A) Acidic strength increases with the increase of stability of carboxylate ion  
 B) Electron-donating alkyl groups decrease the acidity  
 C) Electron-withdrawing groups (-Cl, -Br, -F, -NO<sub>2</sub>, -CN) increase acidity  
 D) Strength of carboxylic acids is not affected by electron-donating or electron-withdrawing group
- Q.61 The specific substance (metabolite) that fits on the enzyme surface and is converted to products is called:**  
 A) Co-factor  
 B) Prosthetic group  
 C) Isoenzyme  
 D) Substrate
- Q.62 Which one of the following gives the correct order of acid strength (strongest first) for ethanoic acid, chloroethanoic acid, and phenol:**  
 A) CH<sub>3</sub>CO<sub>2</sub>H, C<sub>6</sub>H<sub>5</sub>OH, CH<sub>2</sub>ClCO<sub>2</sub>H  
 B) CH<sub>3</sub>CO<sub>2</sub>H, CH<sub>2</sub>ClCO<sub>2</sub>H, C<sub>6</sub>H<sub>5</sub>OH  
 C) CH<sub>2</sub>ClCO<sub>2</sub>H, C<sub>6</sub>H<sub>5</sub>OH, CH<sub>3</sub>CO<sub>2</sub>H  
 D) CH<sub>2</sub>ClCO<sub>2</sub>H, CH<sub>3</sub>CO<sub>2</sub>H, C<sub>6</sub>H<sub>5</sub>OH
- Q.63 The enzyme that catalyze the transfer of groups within molecules to yield isomeric forms is called:**  
 A) Lyases  
 B) Ligases  
 C) Hydrolases  
 D) Isomerases
- Q.64 Identify the incorrect statement:**  
 A) General formula of carboxylic acid is C<sub>n</sub>H<sub>2n+1</sub>COOH  
 B) Structural formula of carboxylic acid is  $\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$   
 C) In IUPAC name, the alphabet "e" of alkane is replaced by -oic acid  
 D) The C-atom in carboxylic group is called α-carbon
- Q.65 Identify the incorrect statement about electronic structure of carboxylic (-COOH) group:**  
 A) In carboxyl group, (-COOH) the word carb has taken from carbonyl and oxy from hydroxyl  
 B) The carbonyl carbon forms sigma bond with the carbon of the alkyl group (sp<sup>3</sup>-sp<sup>2</sup>)  
 C) One of the oxygen (not linked to hydrogen) is sp<sup>3</sup> hybridized  
 D) The carbon atom of the alkyl group is sp<sup>3</sup> hybridized
- Q.66 In the conversion of wine to vinegar:**  
 A) Ethanol is oxidized to ethanoic acid  
 B) Ethanol is reduced to ethanoic acid  
 C) Methanol is mixed with ethanol  
 D) Methanol is mixed with ethanol
- Q.67 Monocarboxylic acids can be obtained by hydrolyzing:**  
 A) Alkyl cyanides (alkane nitriles) in acidic medium  
 B) Acid amides in the presence of alkali  
 C) Aldehydes  
 D) Ethers
- Q.68 Many enzymes contain a protein part and non-protein part. The protein part of enzyme is called:**  
 A) Apoenzyme  
 B) Holoenzyme  
 C) Co-factor  
 D) Co-enzyme
- Q.69 When CH<sub>3</sub>-CH<sub>2</sub>-CH<sub>2</sub>-OH is oxidized in the presence of K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> and H<sub>2</sub>SO<sub>4</sub>, the final product formed is:**  
 A)  $\text{CH}_3-\text{CH}_2-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$   
 B)  $\text{H}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$   
 C)  $\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$   
 D)  $\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{OCH}_3$
- Q.70 All of the following co-factors correctly match with their respective enzymes EXCEPT:**

Options	Co-factors	Enzymes
A)	Fe <sup>+2</sup>	Chrome oxidase
B)	Zn <sup>+2</sup>	Carbonic anhydrase
C)	Mg <sup>+2</sup>	Glucose-6-phosphatase
D)	Vitamin B1	Thiamine glucose phosphatase



**Q.71 Which of the following halo-substituted carboxylic acid is the strongest acid?**

- A)  $\text{FCH}_2\text{COOH}$  C)  $\text{BrCH}_2\text{COOH}$   
B)  $\text{ClCH}_2\text{COOH}$  D)  $\text{ICH}_2\text{COOH}$

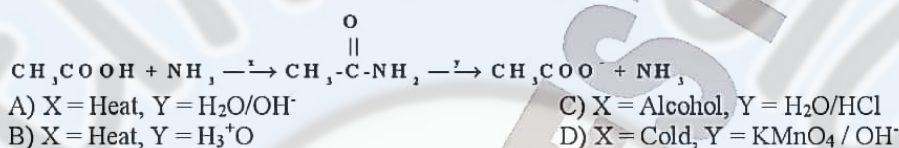
**Q.72 Which of the following derivatives of carboxylic acid is more reactive?**

- A) Acid halide C) Ester  
B) Acid amide D) Acid anhydride

**Q.73 When ethanoyl chloride reacts with methylamine, an amide is formed. What is the structure of the amide formed?**

- A)  $\text{CH}_3 - \text{CH}_2 - \overset{\text{O}}{\parallel} \text{C} - \text{NH}_2$  C)  $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{NH}_2$   
B)  $\text{CH}_3 - \text{CH}_2 - \overset{\text{O}}{\parallel} \text{C} - \text{NHCH}_3$  D)  $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{NHCH}_3$

**Q.74 The X and Y are in the given reaction?**



**Q.75 Carboxylic acids undergo the following type of reactions EXCEPT:**

- A) The reactions in which hydrogen atom of the carboxyl group involved (salt formation)  
B) The reactions in which -OH group is replaced by another group  
C) The reactions involving carboxyl group as a whole  
D) They give electrophilic substitution reaction

**Q.76 Consider the following statements about carboxylic acids.**

**I. They are the only organic groups able to release  $\text{CO}_2$  gas from the carbonates.**

**II. They have higher boiling points due to H-bonding**

**III. They are soluble in water**

**Which of the above statements is/are correct?**

- A) I only C) II and III  
B) II only D) I, II and III

**Q.77 Which of the following does not match correctly?**

Options	Carboxylic acids	Formula
A)	2-Bromopropanoic acid	$\text{HOOC} - \text{CH}(\text{Br}) - \text{COOH}$
B)	2-Propenoic acid	$\text{CH}_2 = \text{CH} - \text{COOH}$
C)	Iso-Butyric acid	$\text{CH}_3 - \text{CH}(\text{CH}_3) - \text{COOH}$
D)	Hexanedioic acid	$\text{HOOC}(\text{CH}_2)_6 - \text{COOH}$

**Q.78 Which of the following best represents the structure of carboxylate ion?**

- A)  $\text{R} - \overset{\ominus}{\text{O}} - \overset{\oplus}{\text{C}} - \overset{\ominus}{\text{O}}$  C)  $\text{R} - \overset{\ominus}{\text{O}} - \overset{\oplus}{\text{C}} - \overset{\ominus}{\text{O}}$   
B)  $\text{R} - \overset{\ominus}{\text{O}} - \overset{\oplus}{\text{C}} = \text{O}$  D)  $\text{R} - \overset{\oplus}{\text{C}} = \overset{\ominus}{\text{O}}$

**Q.79 Nitriles (RCN) on hydrolysis in the presence of a mineral acid yield:**

- A) Ethers C) Aldehydes  
B) Carboxylic acids D) Alcohols

**Q.80 Which of the following esters gives the artificial flavour of orange?**

- A) Octyl acetate C) Benzyl acetate  
B) Ethyl butyrate D) Isobutyl acetate

**Q.81 The solution of which acid is used for seasoning of food:**

- A) Methanoic acid C) Ethanoic acid  
B) Ethanedioic acid D) Butanoic acid

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- Q.82 The bond that determines the secondary structures of proteins is:**  
 A) Covalent bond  
 B) Ionic bond  
 C) Hydrogen bond  
 D) Co-ordinate bond
- Q.83 Which of the following carboxylic acids is stronger acid?**  
 A)  $\text{CH}_3\text{-CH}_2\text{-COOH}$   
 B)  $\text{H}_3\text{C-CH-COOH}$   
     |  
      $\text{CH}_3$   
 C)  $\text{CH}_3\text{-CH-COOH}$   
     |  
      $\text{NO}_2$   
      $\text{CH}_3$   
 D)  $\text{H}_3\text{C-C-COOH}$   
     |  
      $\text{CH}_3$
- Q.84 Identify the incorrect statement about carboxylic acid.**  
 A) The functional group in carboxylic acids is the carboxyl group (-COOH)  
 B) The carboxyl group is a combination of two polar groups (the hydroxyl - OH and carbonyl C = O)  
 C) It is less polar than an alcohol  
 D) Sour milk is a natural source of lactic acid ( $\text{CH}_3\text{CH(OH)COOH}$ )
- Q.85 The common type of secondary structure of proteins is/are:**  
 A)  $\alpha$ -Helix structure only  
 B)  $\beta$ -Pleated sheet structure  
 C) Both A and B  
 D) Neither A nor B

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## PHYSICS NMDCAT

### Nuclear Physics

#### TEST#35 (UNIT # 11)

- Q.86 Radiations emitted by a radioactive elements are:**  
 A) Visible  
 B) Invisible  
 C) Sometimes visible and invisible  
 D) Visible by convex lens
- Q.87 Which of the following used in the medical field?**  
 A) Tracers  
 B) Wilson cloud chamber  
 C) Solid state detectors  
 D) All of these
- Q.88 Which of the following is a true proportion of radiation by an average person?**  
 A) 33% gamma ray  
 B) 16% radon  
 C) Both "A" & "B"  
 D) 16% gamma ray & 33% radon
- Q.89 The basic function of ozone layer is to protect us from:**  
 A) x-rays  
 B)  $\gamma$  - rays  
 C) U.V rays  
 D) Rays of visible region
- Q.90 The food contain mostly which type of radioactive substance:**  
 A) Potassium-40  
 B) Carbon- 14  
 C) Iodine  
 D) Both "A" & "B"
- Q.91 Which of the following remedies can reduce radon level inside the buildings?**  
 A) Using high roof buildings  
 B) Reducing ventilations  
 C) Increasing ventilations  
 D) None of these
- Q.92 For skin cancer which of following can be used:**  
 A) Iodine 131  
 B) Phosphorous 32  
 C) Carbon 14  
 D) Carbon 12
- Q.93 The S.I. unit of radioactivity is:**  
 A) Becquerl  
 B) Curie  
 C) Rutherford  
 D) Roentgen
- Q.94 Which one of following particles most easily penetrates the nucleus of an atom?**  
 A) A proton  
 B) An  $\alpha$  -particle  
 C) A deuteron  
 D) Neutron
- Q.95 How many dose will burn the skin?**  
 A) 0.03 rem  
 B) 300 rem  
 C) 3 msv  
 D) 4 msv
- Q.96 If RBE factor = 10,  $D_e = 400$  rem, dose  $D = ?$**   
 A) 0.2 Gy  
 B) 0.02 Gy  
 C) 0.04 Gy  
 D) 0.4 Gy
- Q.97 One Joule of energy absorbed per kg of body is:**  
 A) Rem  
 B) Gray  
 C) Becquerel  
 D) Rontgen
- Q.98 Radioactive iodine -131 is used to combat cancer of:**  
 A) Heart  
 B) Liver  
 C) Kidney  
 D) Thyroid gland
- Q.99 Equivalent dose can be written as:**  
 A)  $D_e = D \times RBE$   
 B)  $D = D_e \times RBE$   
 C)  $RBE = D_e \times D$   
 D)  $\frac{D}{RBE} = D_e$
- Q.100 Cobalt - 60 is used to:**  
 A) Cure blood cancer  
 B) Cure thyroid cancer  
 C) Cure bone cancer  
 D) Cure tumor malignant tissue
- Q.101 The circulation of the blood can be studied by using:**  
 A) Radioactive sodium 24  
 B) Radioactive Iodine 131  
 C) Cobalt 60  
 D) Phosphorus -32
- Q.102 Curie is a unit of:**  
 A) Radioactivity  
 B) Resistivity  
 C) Conductivity  
 D) Isotopes

- Q.103 Chromosome abnormalities due to radiation exposure can cause:**  
 A) Cancer  
 B) Eye cataracts  
 C) Abnormalities in future generations  
 D) All of these
- Q.104 How many types of radioactive waste exist?**  
 A) 1  
 B) 2  
 C) 3  
 D) 4
- Q.105 Cobalt-60 is a source for:**  
 A)  $\alpha$  -rays  
 B)  $\beta$  - rays  
 C)  $\gamma$  - rays  
 D) All of these
- Q.106 Which of the following can be considered responsible for causing radiations hazards?**  
 A) Colour television  
 B) Luminous watches  
 C) Tobacco leaves  
 D) All of these
- Q.107 How much dose is absorbed by a person who watches T.V per year?**  
 A) 10 mSv  
 B) 30 mSv  
 C) 200 mSv  
 D) 1000 mSv
- Q.108 How much dose is absorbed by a person for working in a uranium mine for one month?**  
 A) 10 mSv  
 B) 30mSv  
 C) 200 mSv  
 D) 1000 mSv
- Q.109 An  $\alpha$  - particle can damage yourself if:**  
 A) It's source is near you  
 B) It's source is away from you  
 C) It's source is swallowed by you  
 D) None of these
- Q.110 File badge \_\_\_\_\_ are used to monitor radiation received by workers in nuclear facilities.**  
 A) Sensors  
 B) Meters  
 C) Dosimeters  
 D) None of these
- Q.111 Radioactive waste are of \_\_\_\_\_ types.:**  
 A) One  
 B) Two  
 C) Three  
 D) Four
- Q.112 Medium level waste are dangerous for:**  
 A) Ground water only  
 B) Land environment only  
 C) Both ground water and land environment  
 D) None of these
- Q.113 It is very difficult to dispose off radioactive waste safely due to their:**  
 A) Small half lives  
 B) Long half lives  
 C) Moderate half lives  
 D) No half lives
- Q.114 Radioisotopes are used to find out what happens in many complex chemical reactions and how they \_\_\_\_\_.**  
 A) Start  
 B) End  
 C) Proceed  
 D) All of these
- Q.115 Radioisotopes of many elements can be made easily by bombardment with neutrons and other \_\_\_\_\_.**  
 A) Elements  
 B) Particles  
 C) Both "A" & "B"  
 D) Data is insufficient



**ENTRANCE TEST – 2021  
NMDCAT REPEATER – ENGLISH****Fragment + Clause, Type of Sentence run on Comma Space – (Test # 35)****Directions: Pick the correct option.****Q.116**

- A) The last time it snows, that was in February, my dad lost control of his car and hit a tree
- B) The last time it snowed, February was the month, my dad lost control of his car and hit a tree.
- C) The last time it snowed, it was in February, my dad lost control of his car and hit a tree.
- D) The last time it snowed, which was in February, my dad lost control of his car and hit a tree.

**Q.117**

- A) The weather forecast predicted snow, for today and it is raining.
- B) The weather forecast predicted snow for today, and it is raining.
- C) The weather forecast predicted it to be snowing today, and it is raining.
- D) The weather forecast predicted snow for today, but it is raining.

**Q.118**

- A) The Olmec culture who flourished in the modern-day Mexican states of Veracruz and Tabasco, was among the earliest complex civilizations.
- B) The Olmec culture, that flourished in the modern-day Mexican states of Veracruz and Tabasco, was among the earliest complex civilizations.
- C) The Olmec culture which flourished in the modern-day Mexican states of Veracruz and Tabasco, was among the earliest complex civilizations.
- D) The Olmec culture, which flourished in the modern-day Mexican states of Veracruz and Tabasco, was among the earliest complex civilizations.

**Q.119**

- A) Teddy loves stuffed bears, his collection includes fifty-four specimens.
- B) Teddy loves stuffed bears his collection includes fifty-four specimens.
- C) Teddy loves stuffed bears, and his collection includes fifty-four specimens.
- D) teddy loves stuffed bears, and his collection includes fifty-four specimens.

**Q.120**

- A) The dam project, which many in the government consider to be a sign of national strength, will destroy hundred of villages and vast areas of wildlife habitat along the river banks.
- B) The dam project which many in the government consider to be a sign of national strength will destroy hundreds of villages and vast areas of wildlife habitat along the river banks.
- C) The dam project, that many in the government consider to be a sign of national strength, will destroy hundreds of villages and vast areas of wildlife habitat along the river banks.
- D) The dam project, which many in the government consider to be a sign of national strength, will destroy hundreds of villages and vast areas of wildlife habitat along the river banks.

**Q.121**

- A) When he was young, he was very adventurous and went on many camping trips.
- B) When he was young; he was very adventurous and went on many camping trips.
- C) When he was young: he was very adventurous and went on many camping trips.
- D) When he was young, he was very adventurous and went on many camping trips.

**Q.122**

- A) The focus of our work is how can we satisfy customers most effectively.
- B) The focus of our work how can we satisfy customers most effectively.
- C) The focus of our work how we can satisfy customers most effectively.
- D) The focus of our work is how we can satisfy customers most effectively.

**Q.123**

- A) It taken him some years more to bring all of Spain to subjection, but he persisted.
- B) It taken him some years more to bring all of Spain to subjection he persisted.
- C) It took him some years more to bring all of Spain to subjection, but he persisted.
- D) It took him some years more to bring all of Spain to subjection, he persisted.

**Q.124**

- A) Stray animals often seen grazing on saplings and grass on road berms.
- B) Stray animals are often seen grazing on saplings and grass over road berms.
- C) Stray animals often seen grazing in saplings and grass on road berms.
- D) Stray animals are often seen grazing on saplings and grass on road berms.

**Q.125**

- A) Although the police had little evidence to prove he guilty, they decided to charge the man with the crime anyway.
- B) Although the police had little evidence to prove that he was guilty; they decided to charge the man with the crime anyway.
- C) Although the police had little evidence to prove he was guilty.
- D) Although the police had little evidence to prove he was guilty, they decided to charge the man with the crime anyway.

**Q.126**

- A) This is going to be the most difficult exam of your college career, you had better start studying for it immediately.
- B) This is going to be the most difficult exam of your college career; you had better start studying for it immediately.
- C) This is going to be the most difficult exam of your college career you had better start studying for it immediately.
- D) This is going to be the most difficult exam of your college career, so, you had better start studying for it immediately.

**Q.127**

- A) Been sure to send whoever interviewed you a thank-you note.
- B) Be sure to send interviewed you a thank-you note.
- C) Be sure to send whoever interviewed you a thank-you note.
- D) Being sure to send whoever interviewed you a thank-you note.

**Q.128**

- A) The children were thinking that dinner should be cheese pizza, I had my mind set on fried chicken.
- B) The children to think that dinner should be cheese pizza, but I had my mind set on fried chicken.
- C) The children thinking that dinner should be cheese pizza, but I had my mind set on fried chicken.
- D) The children were thinking that dinner should be cheese pizza, but I had my mind set on fried chicken.

**Q.129**

- A) She looked at him tenderly, and with a sad expression in her dark blue eyes, she could not speak.
- B) She looked at him tenderly and with a sad expression in her dark blue eyes but could not speak.
- C) She looked at him tenderly ;and with a sad expression in her dark blue eyes,could not speak.
- D) She looked at him tenderly with a sad expression in her dark blue eyes could not speak.

**Q.130**

- A) Whoever wins the game playing in the tournament.
- B) Whoever wins the game played on the tournament.
- C) Whoever wins the game will play in the tournament.
- D) Whoever wins the game will play to the tournament.



**Q.131**

- A) My sister who got her diploma an unemployed social worker.
- B) My sister whom got her diploma in an unemployed social worker
- C) My sister, who got her diploma, is an unemployed social worker
- D) My sister, who got her diploma, an unemployed social worker

**Q.132**

- A) A person will help the needy is a caring person.
- B) A person who will help the needy is a caring person.
- C) A person who will must help the needy is a caring person.
- D) A person who shall keep the needy a caring person.

**Q.133**

- A) Mani, who sometimes likes to be alone, also likes to go to parties.
- B) Mani sometimes, likes to be alone, also likes to go to parties.
- C) Mani sometimes likes to be alone also likes to go to parties.
- D) Mani some times as to be alone, also likes to go to parties.

**Q.134**

- A) Bear in mind however that another customer might purchase the ring before you return tomorrow.
- B) Bear in mind, however, that another customer purchasing the ring before you return tomorrow.
- C) Bear in mind, however, that another customer might purchase the ring before you return tomorrow.
- D) Bear in mind; however, that another customer might purchase the ring before you return tomorrow.

**Q.135**

- A) The idea of get a vaccination was nauseating to the woman since she was deathly afraid of needles and grossing out by blood.
- B) The idea of getting a vaccination was nauseating to the woman since she deathly afraid of needles and grossed out by blood.
- C) The idea of getting a vaccination nauseating to the woman since she was deathly afraid of needles and grossed out by blood.
- D) The idea of getting a vaccination was nauseating to the woman since she was deathly afraid of needles and grossed out by blood.



Test # 35

## MCQ RESPONSE FORM

Roll No.

1	(A) (B) (C) (D)	36	(A) (B) (C) (D)	71	(A) (B) (C) (D)	106	(A) (B) (C) (D)
2	(A) (B) (C) (D)	37	(A) (B) (C) (D)	72	(A) (B) (C) (D)	107	(A) (B) (C) (D)
3	(A) (B) (C) (D)	38	(A) (B) (C) (D)	73	(A) (B) (C) (D)	108	(A) (B) (C) (D)
4	(A) (B) (C) (D)	39	(A) (B) (C) (D)	74	(A) (B) (C) (D)	109	(A) (B) (C) (D)
5	(A) (B) (C) (D)	40	(A) (B) (C) (D)	75	(A) (B) (C) (D)	110	(A) (B) (C) (D)
6	(A) (B) (C) (D)	41	(A) (B) (C) (D)	76	(A) (B) (C) (D)	111	(A) (B) (C) (D)
7	(A) (B) (C) (D)	42	(A) (B) (C) (D)	77	(A) (B) (C) (D)	112	(A) (B) (C) (D)
8	(A) (B) (C) (D)	43	(A) (B) (C) (D)	78	(A) (B) (C) (D)	113	(A) (B) (C) (D)
9	(A) (B) (C) (D)	44	(A) (B) (C) (D)	79	(A) (B) (C) (D)	114	(A) (B) (C) (D)
10	(A) (B) (C) (D)	45	(A) (B) (C) (D)	80	(A) (B) (C) (D)	115	(A) (B) (C) (D)
11	(A) (B) (C) (D)	46	(A) (B) (C) (D)	81	(A) (B) (C) (D)	116	(A) (B) (C) (D)
12	(A) (B) (C) (D)	47	(A) (B) (C) (D)	82	(A) (B) (C) (D)	117	(A) (B) (C) (D)
13	(A) (B) (C) (D)	48	(A) (B) (C) (D)	83	(A) (B) (C) (D)	118	(A) (B) (C) (D)
14	(A) (B) (C) (D)	49	(A) (B) (C) (D)	84	(A) (B) (C) (D)	119	(A) (B) (C) (D)
15	(A) (B) (C) (D)	50	(A) (B) (C) (D)	85	(A) (B) (C) (D)	120	(A) (B) (C) (D)
16	(A) (B) (C) (D)	51	(A) (B) (C) (D)	86	(A) (B) (C) (D)	121	(A) (B) (C) (D)
17	(A) (B) (C) (D)	52	(A) (B) (C) (D)	87	(A) (B) (C) (D)	122	(A) (B) (C) (D)
18	(A) (B) (C) (D)	53	(A) (B) (C) (D)	88	(A) (B) (C) (D)	123	(A) (B) (C) (D)
19	(A) (B) (C) (D)	54	(A) (B) (C) (D)	89	(A) (B) (C) (D)	124	(A) (B) (C) (D)
20	(A) (B) (C) (D)	55	(A) (B) (C) (D)	90	(A) (B) (C) (D)	125	(A) (B) (C) (D)
21	(A) (B) (C) (D)	56	(A) (B) (C) (D)	91	(A) (B) (C) (D)	126	(A) (B) (C) (D)
22	(A) (B) (C) (D)	57	(A) (B) (C) (D)	92	(A) (B) (C) (D)	127	(A) (B) (C) (D)
23	(A) (B) (C) (D)	58	(A) (B) (C) (D)	93	(A) (B) (C) (D)	128	(A) (B) (C) (D)
24	(A) (B) (C) (D)	59	(A) (B) (C) (D)	94	(A) (B) (C) (D)	129	(A) (B) (C) (D)
25	(A) (B) (C) (D)	60	(A) (B) (C) (D)	95	(A) (B) (C) (D)	130	(A) (B) (C) (D)
26	(A) (B) (C) (D)	61	(A) (B) (C) (D)	96	(A) (B) (C) (D)	131	(A) (B) (C) (D)
27	(A) (B) (C) (D)	62	(A) (B) (C) (D)	97	(A) (B) (C) (D)	132	(A) (B) (C) (D)
28	(A) (B) (C) (D)	63	(A) (B) (C) (D)	98	(A) (B) (C) (D)	133	(A) (B) (C) (D)
29	(A) (B) (C) (D)	64	(A) (B) (C) (D)	99	(A) (B) (C) (D)	134	(A) (B) (C) (D)
30	(A) (B) (C) (D)	65	(A) (B) (C) (D)	100	(A) (B) (C) (D)	135	(A) (B) (C) (D)
31	(A) (B) (C) (D)	66	(A) (B) (C) (D)	101	(A) (B) (C) (D)		
32	(A) (B) (C) (D)	67	(A) (B) (C) (D)	102	(A) (B) (C) (D)		
33	(A) (B) (C) (D)	68	(A) (B) (C) (D)	103	(A) (B) (C) (D)		
34	(A) (B) (C) (D)	69	(A) (B) (C) (D)	104	(A) (B) (C) (D)		
35	(A) (B) (C) (D)	70	(A) (B) (C) (D)	105	(A) (B) (C) (D)		

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

NAME: \_\_\_\_\_

FATHER'S NAME: \_\_\_\_\_

ROLL NO. (IN WORDS): \_\_\_\_\_

SIGNATURE OF CANDIDATE: \_\_\_\_\_

DEPUTY SUPDT. SIGNATURE: \_\_\_\_\_

**INSTRUCTIONS**

- USE BLUE BALL PEN ONLY.
- PLEASE FILL IN THE ROLL NO. IN THE CIRCLES.
- IT IS IMPORTANT TO FILL IN THE CIRCLES COMPLETELY AND CORRECTLY. THE EXAMPLE BELOW, CANNOT BE USED. UNIVERSITY CAN NOT BE HELD RESPONSIBLE.
- DO NOT ERASE A RESPONSE. IF A CIRCLE HAS BEEN FILLED INCOMPLETELY, IT WILL BE READ AS SUCH.
- INCORRECT EXAMPLES:
- MULTIPLE RESPONSES ARE NOT ALLOWED.
- TEARING OFF, FOLDING OR PUTTING UNNECESSARY IDENTIFICATION ON THE FORM WILL AUTOMATICALLY DISQUALIFY THE CANDIDATE.