Question paper for recruitment of **Technical Officer - I (EWS)** held on 07.03.2026

Sec-A - General English : 10 Questions

Sec-B - General Awareness : 10 Questions

Sec-C - General Intelligence: 10 Questions

Sec.D - Concerned area / Subject : 70 Questions

GENERAL ENGLISH

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English

Q1. Choose the correct synonym for the word 'brief'

A Heavy

B Dull

C Short

D Loud

Correct Option(s): C

English

Q2. Identify the correctly spelled word

A Receive

B Recieve

C Receeve

D Recive

Correct Option(s): A

English

Q3. The teacher asked the students to pay attention ____ the instructions

A on

B to

C for

D with

Correct Option(s): B

English

Q4. Despite the heavy rain, the football match continued ____ interruption

A with

B without

C under

D by

Correct Option(s): B

English

Q5. He refused to accept the offer because it did not ____ his expectations

A meet

B meets

C meeting

D met

Correct Option(s): A

English

Q6. She was praised for her ability to remain calm ____ pressure

A on

B under

C over

D with

Correct Option(s): B

English

Q7. The new policy will come into effect ____ the first of May

A by

B in

C at

D on

Correct Option(s): D

English

Q8. Rearrange the parts to form a meaningful sentence
1. to submit the report
2. by tomorrow evening
3. the team was asked
4. without any delay
Choose the correct order:

A 3 – 4 – 1 – 2

B 1 – 3 – 2 – 4

C 3 – 1 – 4 – 2

D 4 – 3 – 1 – 2

Correct Option(s): C

English

Q9. Complete the analogy:
Courage is to bravery as honesty is to ____

A truthfulness

B lie

C fear

D silence

Correct Option(s): A

English

Q10. He has been working here for five years. Identify the tense

A Simple Present

B Present Continuous

C Present Perfect

D Present Perfect Continuous

Correct Option(s): D

GENERAL AWARENESS

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English

Q1. Which of the following is a major concern with AI-generated deepfakes?

A Reduced internet usage

B Threats to trust, security, and misinformation control

C Increased cost of data storage

D Lack of entertainment value

Correct Option(s): B

English

Q2. A country investing heavily in "rare-earth recycling" is most likely trying to strengthen which sector?

A Tourism

B Fisheries

C Agriculture

D Semiconductor manufacturing

Correct Option(s): D

English

Q3. Which instrument is used to measure atmospheric pressure?

A Barometer

B Hygrometer

C Thermometer

D Anemometer

Correct Option(s): A

English

Q4. Who was the first woman to win a Nobel Prize?

A Dorothy Hodgkin

B Rosalind Franklin

C Marie Curie

D Ada Lovelace

Correct Option(s): C

English

Q5. What is the study of earthquakes called?

A Geology

B Seismology

C Vulcanology

D Geophysics

Correct Option(s): B

English

Q6. Which of the following is a major driver of zoonotic disease emergence?

A Increased rainfall

B Habitat loss and wildlife-human contact

C Ocean acidification

D Solar storms

Correct Option(s): B

English

Q7. The term "infodemic" refers to:

A A virus that spreads through computers

B A disease caused by excessive screen time

C Overabundance of information, including misinformation, during a crisis

D A decline in global literacy

Correct Option(s): C

English

Q8. Which field uses “lab-on-a-chip” devices for rapid diagnostics?

A Astronomy

B Microfluidics

C Geology

D Marine biology

Correct Option(s): B

English

Q9. Which radiation has the highest frequency?

A X-rays

B Ultraviolet

C Gamma rays

D Infrared

Correct Option(s): C

English

Q10. What type of mirror is used in vehicle headlights?

A Convex

B Concave

C Plane

D Cylindrical

Correct Option(s): B

GENERAL INTELLIGENCE

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English

Q1. A bar graph shows that enzyme activity increases steadily from pH 4 to pH 7 and then drops sharply at pH 9. What is the most reasonable conclusion? (GI)

A The enzyme is denatured at all pH values

B The enzyme likely has an optimal pH near neutrality

C The enzyme works best in acidic conditions

D The enzyme is unaffected by pH

Correct Option(s): B

English

Q2. If a population grows by 5% annually, which statement is most accurate?

A The absolute increase each year is constant

B The absolute increase grows larger each year

C The population will eventually decrease

D The growth rate must decline over time

Correct Option(s): B

English

Q3. Identify the next number in the series: 2, 6, 12, 20, 30, …..

A 36

B 42

C 40

D 56

Correct Option(s): B

English

Q4. A solution is diluted to half its concentration and then half again. What fraction of the original concentration remains?

A 1/2

B 1/3

C 1/4

D 1/8

Correct Option(s): C

English

Q5. A scatter plot shows points clustered tightly around a straight line. This indicates:

A Strong correlation

B Weak correlation

C No correlation

D Random variation

Correct Option(s): A

English

Q6. A sample is reduced to 20% of its original mass. What percentage has been lost?

A 20%

B 40%

C 60%

D 80%

Correct Option(s): D

English

Q7. A quantity increases by 25% and then decreases by 20%. What is the net effect?

A Overall increase

B Overall decrease

C No change

D Cannot be determined

Correct Option(s): C

English

Q8. A graph shows a rapid rise in reaction rate with substrate concentration, followed by a plateau. This suggests:

A First-order kinetics

B Zero-order kinetics

C Enzyme saturation

D No relationship

Correct Option(s): C

English

Q9. A pie chart shows that 30% of a budget goes to salaries, 25% to equipment, 20% to maintenance, and the rest to research. If the research budget is ₹1.25 lakh, what is the total budget?

A ₹4.5 lakh

B ₹5 lakh

C ₹6.25 lakh

D ₹7.5 lakh

Correct Option(s): B

English

Q10. Identify the number in the series: 7, 15, 31, …..

A 47

B 55

C 63

D 79

Correct Option(s): C

CONCERNED AREA / SUBJECT

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English

Q1. DNA replication is semiconservative because:

A Each daughter molecule contains one parental and one newly synthesized strand

B Both strands are newly synthesized

C Only one strand replicates

D DNA polymerase works only on one strand

Correct Option(s): A

English

Q2. The enzyme that removes RNA primers during DNA replication is:

A DNA polymerase I

B DNA polymerase III

C Ligase

D Helicase

Correct Option(s): A

English

Q3. Which bond connects nucleotides in a DNA strand?

A Hydrogen bond

B Peptide bond

C Phosphodiester bond

D Glycosidic bond

Correct Option(s): C

English

Q4. Supercoiling in DNA is relieved by:

A Ligase

B Topoisomerase

C Primase

D Telomerase

Correct Option(s): B

English

Q5. The central dogma describes the flow of information from:

A Protein → RNA → DNA

B DNA → RNA → Protein

C RNA → DNA → Protein

D DNA → Protein → RNA

Correct Option(s): B

English

Q6. A restriction enzyme recognizes:

A Promoters

B Palindromic sequences

C Ribosomal RNA

D Enhancers

Correct Option(s): B

English

Q7. Which vector is commonly used for cloning in bacteria?

A Plasmid

B Cosmid

C BAC

D YAC

Correct Option(s): A

English

Q8. The Shine-Dalgarno sequence is found in:

A Eukaryotic mRNA

B Prokaryotic mRNA

C tRNA

D rRNA

Correct Option(s): B

English

Q9. Which enzyme synthesizes RNA from DNA?

A DNA polymerase

B RNA polymerase

C Ligase

D Primase

Correct Option(s): B

English

Q10. A mutation that changes a codon to a stop codon is called:

A Missense

B Nonsense

C Silent

D Frameshift

Correct Option(s): B

English

Q11. PCR requires all except:

A Template DNA

B Primers

C dNTPs

D Ribosomes

Correct Option(s): D

English

Q12. Annealing temperature depends mainly on:

A Template size

B Primer melting temperature

C Polymerase type

D Mg^{2+} concentration

Correct Option(s): B

English

Q13. The extension step in PCR typically occurs at:

A 55°C

B 72°C

C 95°C

D 37°C

Correct Option(s): B

English

Q14. Real-time PCR detects amplification using:

A UV light

B Fluorescent dyes

C Radioactive probes

D Colorimetric plates

Correct Option(s): B

English

Q15. Reverse transcription PCR starts with:

A DNA

B RNA

C Protein

D Lipids

Correct Option(s): B

English

Q16. Hot start PCR improves specificity by:

A Using cold temperatures

B Activating polymerase only at high temperature

C Adding more Mg^{2+}

D Using longer primers

Correct Option(s): B

English

Q17. The purpose of Mg^{2+} in PCR is to:

A Stabilize primers

B Activate DNA polymerase

C Denature DNA

D Increase annealing

Correct Option(s): B

English

Q18. Nested PCR improves:

A A) Sensitivity

B B) Specificity

C C) Both A and B

D D) Neither

Correct Option(s): C

English

Q19. qPCR Ct value is:

A Time of denaturation

B Cycle at which fluorescence crosses threshold

C Total cycles

D Extension time

Correct Option(s): B

English

Q20. A high Ct value indicates:

A High template concentration

B Low template concentration

C No amplification

D Primer dimer formation

Correct Option(s): B

English

Q21. LB medium is used for culturing:

A Mammalian cells

B Yeast

C E. coli

D Insects

Correct Option(s): C

English

Q22. Antibiotic selection in plasmid culture ensures:

A Faster growth

B Only transformed cells survive

C Higher protein expression

D Sterility

Correct Option(s): B

English

Q23. OD600 of 0.6 in E. coli indicates:

A Lag phase

B Log phase

C Stationary phase

D Death phase

Correct Option(s): B

English

Q24. Autoclaving sterilizes by:

A Dry heat

B Moist heat under pressure

C UV radiation

D Filtration

Correct Option(s): B

English

Q25. Aseptic technique prevents:

A Cell growth

B Contamination

C DNA degradation

D Protein denaturation

Correct Option(s): B

English

Q26. Bacterial transformation by heat shock requires:

A 95°C

B 42°C

C 4°C

D 72°C

Correct Option(s): B

English

Q27. Competent cells are:

A Antibiotic-resistant

B Able to take up DNA

C Dead cells

D Motile cells

Correct Option(s): B

English

Q28. A plasmid with lacZ allows:

A Blue-white screening

B Antibiotic resistance

C Fluorescence

D Protein secretion

Correct Option(s): A

English

Q29. Minimal media contains:

A All amino acids

B Only essential nutrients

C Serum

D Antibiotics

Correct Option(s): B

English

Q30. Bacterial contamination in mammalian culture appears as:

A Slow growth

B Sudden turbidity

C Floating yeast

D Large vacuoles

Correct Option(s): B

English

Q31. DMEM is supplemented with:

A Serum

B Antibiotics

C Glucose

D All of the above

Correct Option(s): D

English

Q32. Trypsin is used to:

A Kill cells

B Detach adherent cells

C Stain cells

D Fix cells

Correct Option(s): B

English

Q33. CO_2 incubators maintain pH using:

A Nitrogen

B Bicarbonate buffer

C Oxygen

D Ammonia

Correct Option(s): B

English

Q34. Mycoplasma contamination is detected by:

A Microscopy

B PCR

C Color change

D All of the above

Correct Option(s): D

English

Q35. Cryopreservation uses:

A 10% DMSO

B 100% ethanol

C 1% SDS

D 50% glycerol

Correct Option(s): A

English

Q36. Confluency refers to:

A Cell viability

B Percentage of surface covered

C Cell doubling time

D Cell size

Correct Option(s): B

English

Q37. HEK293 is a:

A Bacterial strain

B Mammalian cell line

C Yeast strain

D Insect cell line

Correct Option(s): B

English

Q38. FBS provides:

A Growth factors

B Antibiotics

C DNA

D RNA

Correct Option(s): A

English

Q39. Laminar flow hoods use:

A HEPA filters

B UV light only

C CO_2

D Nitrogen

Correct Option(s): A

English

Q40. Contaminated mammalian cultures often show:

A A) Clear medium

B B) pH shift

C C) Slow growth

D D) Both B and C

Correct Option(s): D

English

Q41. C. elegans is a:

A Nematode

B Fly

C Bacterium

D Yeast

Correct Option(s): A

English

Q42. Drosophila is maintained on:

A Agar plates

B Cornmeal medium

C LB broth

D DMEM

Correct Option(s): B

English

Q43. Zebrafish embryos are useful because they are:

A Opaque

B Transparent

C Non-viable

D Anaerobic

Correct Option(s): B

English

Q44. Yeast can be cultured at:

A 16°C

B 30°C

C 42°C

D 4°C

Correct Option(s): B

English

Q45. Nematodes are transferred using:

A Pipette

B Platinum wire pick

C Forceps

D Needle

Correct Option(s): B

English

Q46. Drosophila anesthesia uses:

A CO_2

B Nitrogen

C Oxygen

D Methane

Correct Option(s): A

English

Q47. Yeast mating type is determined by:

A PCR

B Microscopy

C Growth on selective media

D Sequencing

Correct Option(s): C

English

Q48. C. elegans dauer stage is induced by:

A A) High food

B B) Starvation

C C) High temperature

D D) Both B and C

Correct Option(s): D

English

Q49. Zebrafish are maintained in:

A Salt water

B Fresh water

C Brackish water

D Distilled water

Correct Option(s): B

English

Q50. Drosophila life cycle takes about:

A 1 day

B 10 days

C 30 days

D 60 days

Correct Option(s): B

English

Q51. Sanger sequencing uses:

A ddNTPs

B Nanopores

C Fluorescent proteins

D Restriction enzymes

Correct Option(s): A

English

Q52. Illumina sequencing detects:

A pH changes

B Fluorescently labeled nucleotides

C Electrical current

D Radioactivity

Correct Option(s): B

English

Q53. Nanopore sequencing measures:

A Light emission

B Current disruption

C Heat

D pH

Correct Option(s): B

English

Q54. A chromatogram peak overlap indicates:

A Clean sequence

B Mixed template

C High quality

D No DNA

Correct Option(s): B

English

Q55. Sequencing depth refers to:

A Read length

B Number of times a base is read

C GC content

D Error rate

Correct Option(s): B

English

Q56. Adapter sequences are used for:

A Attachment to the sequencing platform

B Protein expression

C Cell culture

D PCR inhibition

Correct Option(s): A

English

Q57. FASTQ files contain:

A Only sequences

B Sequences + quality scores

C Only quality scores

D Protein sequences

Correct Option(s): B

English

Q58. Barcoding allows:

A Multiplexing samples

B Increasing read length

C Reducing errors

D Removing adapters

Correct Option(s): A

English

Q59. GC-rich regions cause:

A Easy sequencing

B Secondary structures

C No amplification

D Fluorescence loss

Correct Option(s): B

English

Q60. Sanger sequencing read length is typically:

A 50 bp

B 200 bp

C 800 bp

D 5000 bp

Correct Option(s): C

English

Q61. Phase contrast microscopy enhances:

A Fluorescence

B Refractive index differences

C Electron density

D Color

Correct Option(s): B

English

Q62. Confocal microscopy uses:

A Pinholes

B Electrons

C X-rays

D UV only

Correct Option(s): A

English

Q63. TEM provides:

A Surface images

B Internal ultrastructure

C Color images

D 3D reconstruction

Correct Option(s): B

English

Q64. SEM detects:

A Transmitted electrons

B Scattered electrons

C Fluorescence

D X-rays

Correct Option(s): B

English

Q65. Fluorophores are excited by:

A Electrons

B Light of a specific wavelength

C Heat

D Sound

Correct Option(s): B

English

Q66. BSL 2 labs handle:

A Non-pathogenic organisms

B Moderate risk pathogens

C High-risk airborne pathogens

D Unknown viruses

Correct Option(s): B

English

Q67. BSL 3 labs require:

A Positive pressure

B Negative pressure

C No PPE

D Open benches

Correct Option(s): B

English

Q68. Class II biosafety cabinets protect:

A Only user

B Only sample

C Both user and sample

D Neither

Correct Option(s): C

English

Q69. Sentinel animals in a rodent facility are used to:

A Increase breeding numbers

B Detect subclinical infections in the colony

C Train new staff

D Reduce cage density

Correct Option(s): B

English

Q70. PPE such as gowns, gloves, and masks are used in animal facilities mainly to:

A Prevent zoonotic transmission and contamination

B Keep animals warm

C Improve visibility

D Reduce noise levels

Correct Option(s): A