[Time: 2¹₂ Hours]

Please check whether you have got the right question paper.

All questions are compulsory.
All questions carry equal marks.

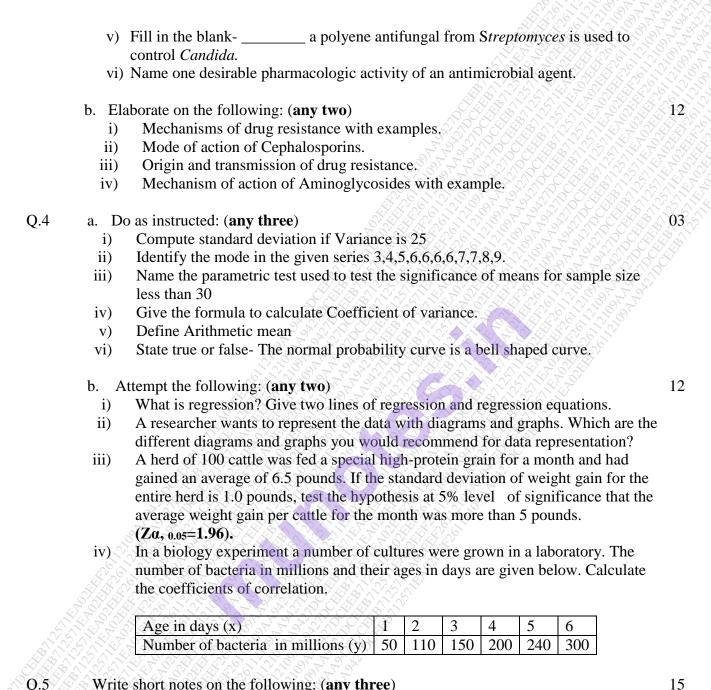
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[Marks:75]

	3. Draw neat , labelled diagrams wherever necessary .	
	4. Use of log books and non –programmable calculator is allowed.	200
Q.1	a. Explain the following: (any three)	03
	i) Gap Junctions	
	ii) Morphogen	
	iii) Synaptic signalling	
	iv) GPCR	
	v) Desensitization	
	vi) Orphan Nuclear receptors	
	b. Discuss the following: (any two)	12
	i) Response of a cell to multiple extracellular signals.	
	ii) Role of NO as an extracellular messenger.	
	iii) Mechanism of activation of Receptors Tyrosine Kinase.	
	iv) Role of calcium as a second messenger.	
Q.2	a. Name the following: (any three)	03
	i) The phase of cell cycle at which the chromosomes move to the opposite poles of	
	spindle.	
	ii) Cells that possess a relatively high level of mitotic activity.	
	iii) An enzyme that moves phosphatidylserine molecules to the outer leaflet of the	
	plasma membrane where they are recognized by macrophages.	
	iv) Malignant tumors of hematopoietic cells of bone marrow.	
	v) Process where clusters of cancer cells dislodge from a tumor and invade the blood	
Δ,	vessels.	
25.57	vi) An extracellular messenger protein that has the ability to kill tumor cells.	
	b. Give an account of the following: (any two)	12
	i) Regulation of the activities of CdKs.	
	ii) Intrinsic pathway of apoptosis.	
	iii) Tumour Suppressor Genes and their role.	
A BOXX	iv) Significance of apoptosis.	
Q.3	a. Do as directed: (any three)	03
3.200	i) Give a term for the following – The antimicrobial agent that is effective only	0.5
677	against a limited variety of pathogens.	
	ii) Give one example of antiviral drug	
	iii) State true or false- Indiscriminate antimicrobial use results in the selection of	
	resistant strains.	
THE STATE	iv) Name the scientist who coined the term selective toxicity.	
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- Q.5 Write short notes on the following: (any three)
 - Mode of action of Metronidazole. i)
 - ii) Use and misuse of antimicrobial agents.
 - Concepts and uses of Chi-square test. iii)
 - Relationship between number of surface receptors and the ligand concentration. iv)
 - Characteristic features of endocrine signalling. V)
 - Interphase and its stages. vi)