

M. B. PATEL SCIENCE COLLEGE, ANAND.

T. Y.B. Sc.: MICROBIOLOGY

FIRST PERIODIC TEST

Mi - 301

Date: 17-10-2011

Time: 3:00 to 4:30 pm

Total marks: 40

- Q: 1** Attempt **any two** of the followings (12)
- a) Justify the role of *E.coli* and Yeast as a model system for studying microbial genetics.
 - b) Discuss organization of eukaryotic chromosome with suitable diagram.
 - c) Explain thermal denaturation of DNA.
 - d) Write on buoyant density of DNA.
- Q: 2** Write on **any two** of the followings (14)
- a) Explain Messelson and Stahl experiment in detail
 - b) Write a note on DNA polymerase and Helicase.
 - c) Write a note on eukaryotic DNA replication.
 - d) Describe rolling circle model of DNA replication.
- Q: 3** Attempt **any one** of the followings. (14)
- a) Describe types of mutations in detail.
 - b) Write a note on chemical and biological mutagenic agents.

Best Of Luck To All

M. B. PATEL SCIENCE COLLEGE, ANAND.

T. Y.B. Sc.: MICROBIOLOGY

FIRST PERIODIC TEST

Mi - 302

Date: 18-10-2011

Time: 3:00 to 4:30 pm

Total marks: 40

- Q: 1** Attempt **any three** of the followings. (12)
- a) Histogram and ogives.
 - b) (A) Find out the mean deviation for following series.
12, 25, 36, 55, 69, 84, & 98
 - c) Basic components of Bioinformatics.
 - d) Draw the basic diagram of computer and list its components.
 - e) Do as directed
 - (a) Find out the median value for following series
8, 24, 30, 56, 34, 52, 79.
 - (b) Convert: $1101_{(2)} = (?)_{(10)}$
- Q: 2** Write on **any two** of the followings (14)
- a) Write a note on classification and applications of restriction endonucleases.
 - b) What is cDNA? Explain cDNA preparation and cDNA library.
 - c) Write a note on the process of PCR.
 - d) Explain the process of isolation of DNA.
- Q: 3** Attempt **any two** of the followings. (14)
- a) Discuss principle, instrumentation and applications of UV – Visible spectroscopy.
 - b) Write a note on atomic absorption spectroscopy.
 - c) Write on PAGE.
 - d) Explain principle, method and applications of emission flame photometry.

Best of luck to all

M.B.PATEL SCIENCE COLLEGE,ANAND.

FIRST PERIODIC TEST-OCT'2011

T.Y.B.SC. MI--303

DATE:-19-10-2011

TOTAL MARKS:40

TIME:-3.00 TO 4.30 P.M

- Q.1 (A) Write on following: (Attempt ANY ONE)
- (1) Organization and role of ETC (7)
 - (2) Bacterial Photophosphorylation (7)
- Q.1 (B) Write on following: (Attempt ANY ONE)
- (1) Draw a neat labelled diagram ATP Synthase & Explain its structure (7)
 - (2) Chemiosmotic theory (7)
- Q.2 (A) Write on: (Attempt ANY ONE)
- (1) Derive M-M equation by using steady state-assumption (8)
 - (2) Reversible inhibition (8)
- (B) Write on: (Attempt ANY ONE)
- (1) Mechanism of Lysozyme (5)
 - (2) Enlist the general properties of an enzyme and Describe enzyme specificity (5)
- Q.3 (A) Write short notes on: (Attempt ANY ONE)
- (1) Biosynthesis of murien (8)
 - (2) Bacteriorhodopsin (8)
- (B) Write short notes on: (Attempt ANY ONE)
- (1) Fluid mosaic model of cell membrane (5)
 - (2) Binding protein transfer (5)

M.B.Patel Science College
1nd Internal Test
Microbiology
Mi-304

Date: 20/10/2011

Day: Thursday

Time: 3.00 p.m. to 4.30 p.m.

Total marks: 40

Q.1 Write any one:

1. Non-specific cellular defense. (11)
2. (i) Types of immunity (05)
(ii) What are the pros and cons of normal flora? Discuss them by giving appropriate examples. (06)

Q.2 Attempt any three. (15)

1. Malaria caused by *Plasmodium falciparum*.
2. Laboratory diagnosis of Enteric fever.
3. Types of diseases.
4. Etiology, transmission, pathogenesis and symptoms of tuberculosis.
5. Laboratory diagnosis of malaria.
6. Causative agent, transmission, pathogenesis and prevention of AIDS.

Q.3 Attempt any two. (14)

1. General structure of immunoglobulin.
2. Properties and types of antigen.
3. Define precipitation reaction and explain immunodiffusion tests.
4. Explain IgM and IgA.

M B PATEL SCIENCE COLLEGE
T Y B Sc MICROBIOLOGY
Mi-305 Agricultural & Environmental Microbiology.

Time: 3 pm-4.30 pm

21/10/2011 FRIDAY

Total Marks : 40

- Q-1 Attempt any one.
- (A) Write short notes on:
- 1 Soil microflora (06)
 - 2 Humus (08)
- (B) Write short notes on:
- 1 Mineral transformation of sulfur. (08)
 - 2 Influence of rhizosphere microflora on plant (06)
- Q-2 Attempt any one:
- (A) Write short notes on:
- 1 Commensalism (06)
 - 2 Synergism (07)
- (B) What is mutualism? Explain it in detail with different examples. (13)
- Q-3 Attempt any one.
- (A) Write short notes on:
- (1) Biomagnification (07)
 - (2) Biodegradation of ABS (Alkyl Benzyl Sulfonates) (06)
- (B) What is bioleaching? Explain mechanism of copper bioleaching & any two methods of copper bioleaching. (13)

BEST LUCK

M.B.PATEL SCIENCE COLLEGE, ANAND

First Periodic Test – OCT – 2011

T.Y.B.Sc. Microbiology. Mi-306

Food & Industrial Microbiology

Date: 22/10/2011

Time: 03:00 pm to 04:30 pm

Day: Saturday

Total Marks: 40

- Q.1 A** Write notes on. (any one)
- 1 Precursors & metabolic regulators in fermentation medium. **08**
 - 2 Solid substrate fermentation. **08**
- B** Do as directed on the following. (any one)
- 1 A brief note - Air lift fermenter. **05**
 - 2 Draw a neat & labeled diagram of a typical fermenter with multibladed impellers, **05**
- Q.2 A** Write in detail on the following (any one)
- 1 Describe physicochemical methods for microbial cell disruption. **08**
 - 2 Describe bioassay of fermentative products. **08**
- B** Write short notes on (any one)
- 1 Rotary vacuum drum filter. **05**
 - 2 Precipitation. **05**
- Q.3** Write on the following. (any one)
- 1 Describe the intrinsic parameters of food affecting its spoilage. **14**
 - 2
 - a Food poisoning by *Cl. Botulinum*. **07**
 - b Spoilage of milk. **07**

BEST OF LUCK