

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**

Vishnupur, Narsapur, Medak District – 502 313

**GPAT COACHING PROGRAMME-2023****SCHEDULE OF THE TRAINING PROGRAMME**

| S.No. | Date       | Name of the staff | Subject       | No. of hours taken | Amount paid (Rs.) |
|-------|------------|-------------------|---------------|--------------------|-------------------|
| 1     | 08.06.2022 | Dr. Nagarjuna     | Pharmacology  | 6                  | 34000             |
| 2     | 09.06.2022 |                   |               | 6                  |                   |
| 3     | 18.12.2022 |                   |               | 6                  |                   |
| 4     | 19.12.2022 |                   |               | 6                  |                   |
| 5     | 20.12.2022 |                   |               | 6                  |                   |
| 6     | 21.12.2022 |                   |               | 6                  |                   |
| 7     | 09.01.2023 | Dr. Venkata rao   | Pharmaceutics | 7                  | 48000             |
| 8     | 10.01.2023 |                   |               | 7                  |                   |
| 9     | 11.01.2023 |                   |               | 7                  |                   |
| 10    | 12.01.2023 |                   |               | 7                  |                   |
| 11    | 25.02.2023 |                   |               | 7                  |                   |
| 12    | 27.02.2023 |                   |               | 7                  |                   |
| 13    | 28.02.2023 | Dr. Lavudu        |               | 7                  | 24000             |
| 14    | 03.03.2023 |                   |               | 6                  |                   |
| 15    | 04.03.2023 |                   |               | 6                  |                   |
| 16    | 05.03.2023 |                   |               | 6                  |                   |
| 17    | 12.03.2023 |                   |               | 6                  |                   |
| 18    | 16.04.2023 |                   |               | 6                  |                   |
| 19    | 17.04.2023 |                   | 6             |                    |                   |
| TOTAL |            |                   |               |                    | 1,06,000          |

- 3000 collected from each student.
- 18 members registered for this programme.
- Money collected from students-54000 (18\*3000).

  
Principal  
Signature of the GPAT coordinator

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
**Narsapur, Medak Dist. 502313**

**GPAT Model Exams**

**Ac.Yr. 2022-23**

| <b>S.No.</b> | <b>Name of the subject</b>              | <b>Date</b> |
|--------------|---|-------------|
| 1            | Ph. Organic chemistry                   | 20.08.2022  |
| 2            | Pharmaceutics (Suspensions & Emulsions) | 23.09.2022  |
| 3            | Pharmaceutics (Semisolids)              | 27.10.2022  |
| 4            | Pharmacology                            | 18.11.2022  |
| 5            | Pharmacognosy                           | 15.12.2022  |
| 6            | Biotechnology                           | 23.01.2023  |

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION&RESEARCH**  
**VISHNUPUR, NARSAPUR, MEDAK Dt-502313**

**GPAT (2023) Practice Exam – VI**

**Subject : Bio technology**

**Time : 1hr**

**Date : 23.01.2023**

**Name :**

**Regd No:**

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**BIOTECHNOLOGY**

1. Hybridoma technology is used to produce
  - a) **Monoclonal antibodies**
  - b) Polyclonal antibodies
  - c) both monoclonal and polyclonal antibodies
  - d) B cells
2. Ames test is used to determine
  - a) the mutagenicity of a chemical
  - b) carcinogenicity of a chemical
  - c) **both mutagenicity and carcinogenicity of a chemical**
  - d) toxicity of a chemical
3. The bacteria known to be naturally competent for transformation of DNA is
  - a) **Escherichia coli**
  - b) Bacillus subtilis
  - c) Mycobacterium tuberculosis
  - d) Yersinia pestis
4. Antibiotic resistance marker that CANNOT be used in a cloning vector in Gram negative bacteria is
  - a) **Streptomycin**
  - b) Ampicillin
  - c) Vancomycin
  - d) Kanamycin
5. Program used for essentially local similarity search is
  - a) **BLAST**
  - b) Ras Mol
  - c) ExPASy
  - d) SWISS-PROT
6. Peptidyl transferase activity resides in
  - a) 16S rRNA
  - b) **23S rRNA**
  - c) 5S rRNA
  - d) 28S rRNA
7. In transgenics, alterations in the sequence of nucleotide in genes are due to
  - P. Substitution
  - Q. Deletion
  - R. Insertion
  - S. Rearrangement
  - a) **P and Q**
  - b) P, Q and R
  - c) Q and R
  - d) R and S
8. During transcription
  - a) DNA Gyrase introduces negative supercoils and DNA Topoisomerase I removes negative supercoils
  - b) DNA Topoisomerase I introduces negative supercoils and DNA removes negative supercoils
  - c) **both DNA Gyrase and DNA Topoisomerase I introduce negative supercoils**
  - d) both DNA Gyrase and DNA Topoisomerase I remove negative supercoils
9. Under stress conditions bacteria accumulate
  - a) ppGpp (Guanosine tetraphosphate)
  - b) pppGpp (Guanosine pentaphosphate)
  - c) both ppGpp and pppGpp
  - d) **either ppGpp or pppGpp**
10. An example for template independent DNA polymerase is
  - a) **DNA Polymerase I**
  - b) RNA polymerase
  - c) Terminal deoxynucleotidyl transferase
  - d) DNA polymerase III
11. Which one of the following DOES NOT belong to the domain of Bacteria?
  - a) Cyanobacteria
  - b) Proteobacteria
  - c) **Bacteroids**
  - d) Methanobacterium
12. Interferon - $\beta$  is produced by
  - a) **bacteria infected cells**
  - b) virus infected cells
  - c) both virus and bacteria infected cells
  - d) fungi infected cells

13. A culture of bacteria is infected with bacteriophage at a multiplicity of 0.3. The probability of a single cell infected with 3 phages is  
a) 0.9                      b) 0.27                      c) 0.009                      d) 0.027
14. A neonatally thymectomized mouse, immunized with protein antigen shows  
a) both primary and secondary responses to the antigen    b) only primary response to the antigen  
c) delayed type hypersensitive reactions                      d) no response to the antigen
15. Lymphocytes interact with foreign antigens in  
a) Bone marrow    b) Peripheral blood    c) Thymus    d) Lymph nodes

16. Somatic cell gene transfer is used for  
 P. transgenic animal production      Q. transgenic diploid cell production  
 R. in-vitro fertilization      S. classical breeding of farm animals  
 a) P,R and S      b) P, Q and R      c) **P and R**      d) P only
17. Accession number is a unique identification assigned to a  
 a) single database entry for DNA / Protein      b) Single database entry for DNA only  
 c) single database entry for Protein only      d) multiple database entry for DNA / Protein only
18. Expressed Sequence Tag is defined as  
 a) **a partial sequence of a codon randomly selected from cDNA library**  
 b) the characteristic gene expressed in the cell  
 c) the protein coding DNA sequence of a gene  
 d) uncharacterized fragment of DNA presence in the cell
19. In a chemostat operating under steady state, a bacterial culture can be grown at dilution rate higher than maximum growth rate by  
 a) partial cell recycling      b) **using sub-optimal temperature**  
 c) pH cycling      d) substrate feed rate cycling
20. During lactic acid fermentation, net yield of ATP and NADH per mole of glucose is  
 a) 2 ATP and 2 NADH      b) 2 ATP and 0 NADH      c) **4 ATP and 2 NADH**      d) 4 ATP and 0 NADH
21. Identify the enzyme that catalyzes the following reaction  

$$\alpha - \text{Ketoglutarate} + \text{NADH} + \text{NH}_4^+ + \text{H}^+ \xrightarrow{?} \text{Glutamate} + \text{NAD}^+ + \text{H}_2\text{O}$$
  
 a) **Glutamate synthetase**      b) Glutamate oxoglutarate aminotransferase  
 c) Glutamate dehydrogenase      d)  $\alpha$ - ketoglutarate deaminase
22. The degree of inhibition for an enzyme catalyzed reaction at a particular inhibitor concentration is independent of initial substrate concentration. The inhibition follows.  
 a) competitive inhibition      b) **mixed inhibition**  
 c) un-competitive inhibition      d) non-competitive inhibition
23. Oxidation reduction reaction with positive standard redox potential ( $\Delta E^0$ ) have  
 a) **positive  $\Delta G^0$**       b) negative  $\Delta G^0$       c) positive  $\Delta E^0$       d) negative  $\Delta E^0$
24. Nuclease – hypersensitive sites in the chromosomes are sites that appear to be  
 a) H2 and H4 histone free      b) **H1 and H2 histone free**  
 c) H3 and H4 histone free      d) Nucleosome free
25. The formation of peptide cross – links between adjacent glycan chains in cell wall synthesis is called  
 a) **Transglycosylation**      b) Autoglycosylation      c) Autopeptidation      d) Transpeptidation
26. Determine the correctness or otherwise of the following Assertion (a) and the Reason (r)  
**Assertion:** Somatic embryogenesis in plants is a two step process comprising of embryo initiation followed by embryo products.  
**Reason:** Embryo initiation is independent of the presence of 2, 4-dichlorophenoxyacetic acid whereas embryo production requires a high concentration of 2, 4-dichlorophenoxyacetic acid.  
 a) both (a) and (r) are true and (r) is the correct reason for (a)  
 b) both (a) and (r) are true and (r) is not the correct reason for (a)  
 c) (a) is true but (r) is false  
 d) (a) is false but (r) is true

27. An immobilized enzyme being used in a continuous plug flow reactor exhibits an effectiveness factor ( $\eta$ ) of 1.2. The value of  $\eta$  being greater than 1.0 could be apparently due to
- substrate inhibited kinetics with internal pore diffusion limitation
  - external pore diffusion limitation
  - sigmoidal kinetics
  - unstability of the enzyme**
28. A roller bottle culture vessel perfectly cylindrical in shape having inner radius ( $r$ ) = 10 cm and length ( $l$ ) = 20 cm was fitted with a spiral film of length ( $L$ ) = 30 cm and width ( $W$ ) = 20 cm. If the film can support  $10^5$  anchorage dependent cells per  $\text{cm}^2$ , the increase in the surface area after fitting the spiral film and the additional number of cells that can be grown respectively are
- $1200 \text{ cm}^2$  and  $12 \times 10^7$  cells
  - $600 \text{ cm}^2$  and  $6 \times 10^7$  cells
  - $600 \text{ cm}^2$  and 8300 cells
  - $1200 \text{ cm}^2$  and 8300 cells

29. Determine the correctness or otherwise of the following **Assertion (a)** and the **Reason (r)**

**Assertion :** MTT assay is used to determine cell viability based on the principle of colour formation by DNA fragmentation.

**Reason :** MTT assay is used to determine cell viability based on the colour development by converting tetrazolium soluble salt to insoluble salt.

- both (a) and (r) are true and (r) is the correct reason for (a)
- both (a) and (r) are true and (r) is not the correct reason for (a)
- (a) is true but (r) is false
- (a) is false but (r) is true

30. Match the following antibiotics in **Group I** with their mode of action in **Group II**

**Group I**

- Chloramphenicol
- Norfloxacin
- Puromycin
- Rifampicin

**Group II**

- Binds to DNA gyrase
- Binds to RNA Polymerase
- Inhibits peptidyl transferase
- Mimics aminoacyl-tRNA

- a) P-1, Q-3, R-2, S-4    b) P-3, Q-1, R-2, S-4    c) **P-3, Q-1, R-4, S-2**    d) P-4, Q-2, R-3, S-1

31. Match the chemicals in **Group I** with the possible type / class in **Group II**

**Group I**

- Picloram
- Zeatin
- Thiamine
- Glutamine

**Group II**

- Vitamin
- Auxin
- Amino Acid
- Cytokinin

- a) **P-2, Q-4, R-1, S-3**    b) P-4, Q-1, R-2, S-3    c) P-3, Q-1, R-2, S-4    d) P-4, Q-2, R-1, S-3

32. Match **Group I** with **Group II**

**Group I**

- Fibronectin
- Insulin
- $\alpha$  - Macroglobulin
- Transferrin

**Group II**

- Uptake of amino acids and glucose
- Trypsin inhibitor
- Binds iron
- Cell attachment to substratum

- a) **P-2, Q-1, R-4, S-3**    b) P-3, Q-2, R-1, S-4    c) P-4, Q-2, R-1, S-3    d) P-4, Q-1, R-2, S-3

33. Match the promoters listed in **Group I** with the tissues listed in **Group II**

**Group - I**

- $\alpha$ - Amylase
- Glutenin
- Phaseollin
- Patatin

**Group - II**

- Endosperm
- Tuber
- Aleurone
- Cotyledon

- a) P-3, Q-1, R-4, S-2    b) **P-3, Q-4, R-1, S-2**    c) P-4, Q-2, R-1, S-2    d) P-1, Q-3, R-2, S-4

34. Consider the following statements,

I. T4 DNA ligase can catalyze blunt end ligation more efficiently than E.Coli DNA ligase.

II. The ligation efficiency of T4 DNA ligase can be increased with PEG and ficoll.

a) only I is true      b) both I and II are true      c) **only II is true**      d) I is true and II is false

35. The turnover numbers for the enzymes, E1 and E2 are  $150 \text{ s}^{-1}$  and  $15 \text{ s}^{-1}$  respectively. This means

a) E1 binds to its substrate with higher affinity than E2

b) The velocity of reactions catalyzed by E1 and E2 at their respective saturating substrate concentrations could be equal, if concentration of E2 used is 10 times that of E1

c) The velocity of E1 catalyzed reaction is always greater than that of E2

d) The velocity of E1 catalyzed reaction at a particular enzyme concentration and saturating substrate concentration is lower than that of E2 catalyzed reaction under the same conditions.

36. Match the items in Group I with Group II

**Group I (Vectors)**

P.  $\lambda$  phage

Q. Bacterial Artificial Chromosomes (BACs)

R. P1 derived Artificial Chromosomes (PACs)

S.  $\lambda$  cosmid

**Group II (Maximum DNA Packaging)**

1. 35-45 kb

2. 100-300 kb

3.  $\leq 300 \text{ kb}$

4. 5-25 kb

a) P-3, Q-4, R-1, S-2

b) P-1, Q-3, R-2, S-4

c) P-4, Q-3, R-2, S-1

d) P-1, Q-2, R-3, S-4

37. Match the items in Group I with Group II

**Group I**

P. *Staphylococcus aureus*

Q. *Candida albicans*

R. *Mycobacterium tuberculosis*

S. *Lactobacillus lactis*

**Group II**

1. Biofilms

2. Bacteriocins

3. Methicillin resistance

4. Isoniazid

a) P-1, Q-4, R-2, S-3

b) P-2, Q-3, R-1, S-4

c) **P-3, Q-1, R-4, S-2**

d) P-1, Q-2, R-4, S-3

38. A mutant  $G_{\alpha}$  protein with increased GTPase activity would

a) not bind to GTP

b) not bind to GDP

c) **show increased signaling**

d) show decreased signaling

39. Dizygotic twins are connected to a single placenta during their embryonic development. These twins.

a) have identical MHC haplotypes

b) **have identical  $T_H$  cells**

c) have identical T cells

d) can accept grafts from each other (both (A) and (B))

40. The dissociation constant  $K_d$  for ligand binding to the receptor is  $10^{-7} \text{ M}$ . The concentration of ligand required for occupying 10% of receptors is

a)  $10^{-6} \text{ M}$

b)  $10^{-7} \text{ M}$

c)  **$10^{-8} \text{ M}$**

d)  $10^{-9} \text{ M}$

41. Receptor R is over expressed in CHO cells and analysed for expression.  $6 \times 10^7$  cells were incubated with its radioactive ligand (specific activity 100 counts per picomole). If the total counts present in cell pellet was 1000 cpm, the average number of receptors R per cell is (assume complete saturation of receptors with ligand and one ligand binds to one receptor).

a)  $10^{-4}$

b)  $10^{-5}$

c)  **$10^6$**

d)  $10^7$

42. A cell has five molecules of a rare mRNA. Each cell contains  $4 \times 10^5$  mRNA molecules. How many clones one will need to screen to have 99% probability of finding at least one recombinant cDNA of the rare mRNA, after making cDNA library from such cell?

a)  $4.50 \times 10^5$

b)  $3.50 \times 10^5$

c)  $4.20 \times 10^5$

d)  $4.05 \times 10^5$

43. Match the products in Group I with the microbial cultures in Group II used for their industrial production.

**Group I**

P. Gluconic acid

Q. L-Lysine

**Group II**

1. *Leuconostoc mesenteroids*

2. *Aspergillus niger*

- R. Dextran  
S. Cellulase
3. *Brevibacterium flavum*  
4. *Trichoderma reesei*
- a) P-2, Q-1, R-3, S-4      b) P-1, Q-3, R-4, S-2      c) P-2, Q-3, R-1, S-4      d) P-3, Q-2, R-4, S-1
44. Determine the correctness or otherwise of the following **Assertion (a)** and the **Reason (r)**  
**Assertion:** Cytoplasmic male sterility (cms) is invariably due to defect(s) in mitochondrial function.  
**Reason :** cms can be overcome by pollinating a fertility restoring (Rf) plant with pollen from a non cms plant.
- a) both (a) and (r) are true and (r) is the correct reason for (a)  
b) both (a) and (r) are true and (r) is not the correct reason for (a)  
c) (a) is true but (r) is false  
d) (a) is false but (r) is true
45. Thermal death of microorganisms in the liquid medium follows first order kinetics. If the initial cell concentration in the fermentation medium is  $10^8$  cells / ml and the final acceptable contamination level is  $10^{-3}$  cells, for how long should  $1\text{ m}^3$  medium be treated at temperature of  $120^\circ$  (thermal deactivation rate constant =  $0.23/\text{min}$ ) to achieve acceptable load/  
a) 48 min      b) 11 min      c) 110 min      d) 20 min
46. True breeding *Drosophila* flies with curved wings and dark bodies were mated with true breeding short wings and tan body *Drosophila*. The F<sub>1</sub> progeny was observed to be with curved wings and tan body. The F<sub>1</sub> progeny was again allowed to breed and produced flies of the following phenotype, 43 curved wings tan body, 15 short wings tan body, 16 curved wings dark body and, 6 short wings dark body. The mode of inheritance is  
a) Typical Mendelian with curved wings and tan body being dominant  
b) Typical non-Mendelian with curved wings and tan body not following any pattern  
c) Mendelian with suppression of phenotypes  
d) Mendelian with single crossover
47. Match Group I with Group II
- | Group I                    | Group II                          |
|----------------------------|-----------------------------------|
| P. Real Time – PCR         | 1. Biochips                       |
| Q. 2-D Electrophoresis     | 2. Syber Green                    |
| R. Affinity chromatography | 3. Antibody linked sephrose beads |
| S. Microarray              | 4. Ampholytes                     |
- a) P-1, Q-2, R-4, S-3      b) P-2, Q-3, R-4, S-1      c) P-2, Q-4, R-3, S-1      d) P-3, Q-2, R-1, S-4
- A culture of *Rhizobium* is grown in a chemostat ( $100\text{ m}^3$  bioreactor). The feed contains 12 g/L sucrose,  $K_s$  for the organism is  $0.2\text{ g/L}$  and  $\mu_m = -/3\text{ h}^{-1}$ .
48. The flow rate required to result in steady state concentration of sucrose as  $1.5\text{ g/L}$  in the bioreactor will be  
a)  $15\text{ m}^3\text{ h}^{-1}$       b)  $26\text{ m}^3\text{ h}^{-1}$       c)  $2.6\text{ m}^3\text{ h}^{-1}$       d)  $150\text{ m}^3\text{ h}^{-1}$
49. If  $Y_{x/s} = 0.4\text{ g/g}$  for the above culture and steady state cell concentration in the bioreactor is  $4\text{ g/L}$  the resulting substrate concentration will be  
a)  $2\text{ g/L}$       b)  $8\text{ g/L}$       c)  $4\text{ g/L}$       d)  $6\text{ g/L}$
- The width of the lipid bilayer membrane is  $30\text{ \AA}$ . It is permeated by a protein which is a right handed  $\alpha$ -helix.
50. The number of  $\alpha$ -helical turns permeating the membrane is  
a) 5.6 turns      b) 3.5 turns      c) 6.5 turns      d) 5.0 turns
51. The number of amino acid residues present in the protein is  
a) 15      b) 18      c) 17      d) 20



The standard redox potential values for two half – reactions, are given below. The value for Faraday's constant is  $96.48 \text{ kJ V}^{-1} \text{ mol}^{-1}$  and Gas constant R is  $8.31 \text{ J K}^{-1} \text{ mol}^{-1}$ .



52. The  $\Delta G^\circ$  for the oxidation of NADH by FAD is  
 a)  $-9.25 \text{ kJ mol}^{-1}$       **b)  $-103.04 \text{ kJ mol}^{-1}$**       c)  $+51.52 \text{ kJ mol}^{-1}$       d)  $-18.5 \text{ kJ mol}^{-1}$
53. The value of  $\Delta G'$ , given  $K_{eq}$  as 1.7, at  $23^\circ\text{C}$  will be  
 a)  **$-17.19 \text{ kJ mol}^{-1}$**       b)  $-19.8 \text{ kJ mol}^{-1}$       c)  $+52.82 \text{ kJ mol}^{-1}$       d)  $-117.07 \text{ kJ mol}^{-1}$
- During bioconversion of sucrose to citric acid by *Aspergillus niger* final samples of 6 batches of fermentation broth were analyzed for citric acid content. The results (in g/L) were found to be 47.3, 52.2, 49.2, 52.4, 49.1 and 46.3.
54. The mean value of acid concentration will be  
 a) **49.4**      b) 51.0      c) 48.2      d) 50.8
55. The standard deviation for the above results is  
 a) 2.49      b) 3.0      c) 1.84      **d) 5.91**
56. Which of the following options is the closest in meaning to the word below:  
**Circuitous**  
 a) Cyclic      b) indirect      **c) confusing**      d) crooked
57. The question below consists of a pair of related words followed by four pairs of words. Select the pair that best expresses the relation in the original pair.  
 Unemployed : worker  
 a) fallow : land      b) unaware : sleeper      c) wit : jester      d) renovated : house
58. Choose the most appropriate work from the options given below to complete the following sentence:  
 If we manage to \_\_\_\_\_ our natural resources, we would leave a better planet for our children.  
 a) uphold      b) restrain      c) cherish      **d) conserve**
59. Choose the most appropriate word from the options given below to complete the following sentence:  
 His rather casual remarks on politics \_\_\_\_\_ his lack of seriousness about the subject.  
 a) masked      b) belied      **c) betrayed**      d) suppressed
60. 25 persons are in a room. 15 of them play hockey, 17 of them play football and 10 of them play both hockey and football. Then the number of persons playing neither hockey nor football is:  
 a) 2      **b) 17**      c) 13      d) 3
61. Modern warfare has changed from large scale clashes of armies to suppression of civilian populations. Chemical agents that do their work silently appear to be suited to such warfare; and regretfully, there exist people in military establishments who think that chemical agents are useful tools for their cause. Which of the following statements best sums up the meaning of the above passage:  
 a) Modern warfare has resulted in civil strife.      b) Chemical agents are useful in modern warfare  
 c) Use of chemical agents in warfare would be undesirable.  
**d) People in military establishments like to use chemical agents in war.**

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**ATTENDANCE LIST-GPAT 2023**

Subject: Biotechnology

Date: 23.01.2023

**Students Attendance & Marks Sheet**

| S.No. | Roll No.   | Name of the Student    | Signature    |
|-------|------------|------------------------|--------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   | Harshitha    |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh       |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani      |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha     |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishnavi    |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chay         |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai          |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor         |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar    |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajyalakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep      |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina        |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya       |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath      |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi    |

*J. Bindu*  
Signature of the GPAT coordinator

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION&RESEARCH**  
**VISHNUPUR, NARSAPUR, MEDAK Dt-502313**

**GPAT (2023) Practice Exam – V**

**Subject : Pharmacognosy**

**Time : 1hr**

**Date : 15.12.2022**

**Name :**

**Regd No:**

1. The synonym of Lactose ( )  
a) Milk sugar b) Butter sugar c) Crystalline sugar d) Pure sugar
2. Isapgol seeds are adulterated with: ( )  
a) Plantagopurshii b) Plantagolanciolata  
c) Plantagoaristala d) Plantagopysllium
3. Rhubarb belongs to the family ( )  
a) Polygonaceae b) Leguminosae c) Apocyanaceae d) Labiatae
4. Drug is not under the class of organized drug ( )  
a) Leaves b) flowers c) Fruits d) Gums
5. The synonym for 'Sesame oil' ( )  
a) Hydrocarpus oil b) Margosa oil c) Maize oil d) Gingally oil
6. Which of the following oil is used as vehicle of oily injectables ( )  
a) Arachis oil b) Linseed oil c) Castor oil d) Jojoba oil
7. Acid value is defined as ( )  
a) Number of milligram of potassium hydroxide required to neutralize one gram of fat or oil  
b) Number of gram of potassium hydroxide required to neutralize one gram of fat or oil  
c) Number of Kilogram of potassium hydroxide required to neutralize one gram of fat or oil  
d) Number of ml of potassium hydroxide (5N) required to neutralize one gram of fat or oil
8. The test not used as an analytical parameter for oil: ( )  
a) Acetyl value b) Acid value c) Hydroxyl value d) Ketone value
9. Ara A is obtained from ----- source ( )  
a. marine b. plant c. animal d. mineral
10. Colophony comes under the category ( )  
a. tannins b. alkaloids c. volatile oils d. resins
11. Physostigmine acts on ( )  
a. CNS b. ANS c. CVS d. digestive system
12. Official drug of cassia ( )  
a. cassia obovata b. cassia angustifolia c. cassia auriculata d. cassia densiflora
13. Adulterant of nux vomica ( )  
a. strychnousnuxblanda c. strychnousvomitoria  
b. strychnousperikensis d. strychnousmicrantha
14. Mucilages are ----- products ( )  
a. pathological b. physiological c. non pathological d. derived
15. Capsicum belongs to ( )  
a. oleo resin b. oleo gum resin c. balsam d. glycoresin
16. Method of collection of bark ( )  
a. felling b. uprooting c. coppicing d. all of the above
17. Colchicum is propagated from ( )  
a. corms b. suckers c. runners d. offsets

- Phytohormones used for breakdown of chlorophyll ( )  
a. auxins b. cytokinins c. gibberelins d. ethylene
19. Which of these method is used for drying of tannins ( )  
a. tray drying b. spray drying c. vacuum drying d. none
20. Percentage of moisture present in digitalis ( )  
a. NMT 10 b. NMT 5 c. NMT 8 d. NMT 15
21. Ipecac belongs to ( )  
a. emetic b. anti depressant c. laxative d. carminative
22. The drug belongs to clavicipitaceae family ( )  
a. datura b. liquorice c. ergot d. tragacanth
23. Externally cardamom seeds has ( )  
a. lichens b. rugae c. wrinkles d. lines
24. Number of vittae present in dill ( )  
a. 10 b. 4 c. 12 d. 6
25. Oil used in dysurea ( )  
a. peppermint oil b. sandal wood oil c. lemongrass oil d. none
26. Saigon cinnamon is obtained from ( )  
a. cinnamomumzeylanicum b. cinnamomumbourmannii  
c. cinnamomum cassia d. cinnamomumofficinalis
27. Insecticidal drug ( )  
a. agar b. shark liver oil c. citronella d. fennel
28. The drug belongs to liliaceae family ( )  
a. Aloe b. senna c. ginseng d. strophanthus
29. The viscosity of traganth is due to ( )  
a. Hydroxyl groups b. methoxy group c. phenolic group d. none
30. Chemical used for testing oxidase enzyme in acacia ( )  
a. Benzidine b. PDAB c. potassium dichromate d. sodium phosphate
31. Agar is obtained from ( )  
a. Green algae b. red algae c. snails d. sponges
32. The byproduct of maize starch preparation useful as culture medium for antibiotics ( )  
a. Corn oil b. cornsteep liquor c. embryo d. gluten
33. Artificial invert sugar, adulterant of honey is detected by ----- test ( )  
a. Borntragers test b. legal test c. salkowski test d. fehles test
34. The toxic principle present in castor oil ( )  
a. Ricin b. resene c. lipase d. recinine
35. Botanical name of kokum butter ( )  
a. Garciniaindica b. sesamumindicum c. carthamustinctorius d. none
36. Cotton seed oil is identified by ( )  
a. Kreis test b. halphens test c. murexide test d. gold beater skin test
37. Lipid used as ingredient of paraffin ointment I.P. ( )  
a. Carnauba wax b. bees wax c. lard d. wool fat
38. Spermaceti is obtained from ( )  
a. Hog b. sperm whale c. honey comb d. fish
39. Extraction method used for volatile oil from plant drugs ( )  
a. Hydrodistillation b. eculle c. enfluerage d. all the above
40. Volatile oil nutmeg is present in ( )  
a. mace b. bark c. root d. leaf
41. Swelling factor of ispagol seeds ( )  
a. 5-7 b. 3-4 c. 10-13 d. 14-16
42. umbelliferous drug ( )  
a. fennel b. myrobalan c. clove d. menthe

a. Stomatal number  
b. Vein islet number  
c. Vein termination number  
d. Stomatal index

a. Picrocrocin      b. Picroside      c. Picrasmin      d. Gymnemic acid

a. citronella                  b. spearmint                  c. clove                  d. lemon peel

a. *Eugenia caryophyllus*    b. *Eugenia plexuosus*    c. *carumcarvi*    d. *anethumgraveolens*

a. covering      b. glandular      c. covering and glandular      d. absent

a. fruits      b. leaves                  c. fruits                  d. floweres

a. hydnocarpus      b. citronella      c. lemon grass      d. dill

a. gum                      b. mucilage                      c. oil                      d. lipid

1. A
2. D
3. A
4. D
5. B
6. A
7. A
8. D
9. A
10. D
11. B
12. B
13. A
14. B
15. A
16. D
17. A
18. B
19. B
20. B
21. A
22. C
23. B
24. C
25. B
26. B
27. C
28. A
29. B

- 30. A
- 31. a
- 32. b
- 33. d
- 34. a
- 35. a
- 36. b
- 37. a
- 38. b
- 39. d
- 40. a
- 41. c
- 42. a
- 43. d
- 44. a
- 45. d
- 46. a
- 47. d
- 48. c
- 49. a
- 50. a

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**ATTENDANCE LIST-GPAT 2023**

Subject: Pharmacognosy

Date: 15.12.2022

**Students Attendance & Marks Sheet**

| S.No. | Roll No.   | Name of the Student    | Signature    |
|-------|------------|------------------------|--------------|
| 1     | 19DH1R0026 | GANTAMOLINA HARSHITHA  | Harshitha    |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh       |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani      |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha     |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishnavi    |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chandana     |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai Kiran    |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor         |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar    |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajyalakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep      |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina Sar    |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya       |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath      |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi    |

  
Signature of the GPAT coordinator

GPAT (2023) Practice Exam – IV

Subject : Pharmacology

Time : 1hr

Date : 18.11.2022

Name :

Regd No:

1. All of the following antibiotics bind to the 50S subunit of the ribosome thereby inhibiting protein synthesis expect ( )  
a. Chloramphenicol b. Erythromycin c. Pencilline d. Doxycycline
2. Pharmacokinetics of doxycycline ( )  
a. 20% bound by serum proteins  
b. 60-70% absorption after oral administration  
c. Absorption is impaired by divalent cations,  $Al^{3+}$ , and antacids  
d. Widely distributed especially into the CSF
3. Which of the following inhibits DNA gyrase? ( )  
a. Penicillin b. Trimethoprim c. Chloramphenicol d. Ciprofloxacin
4. Resistance to Penicillin and other  $\beta$  lactams is due to ( )  
a. Modification of target PBPs  
b. Impaired penetration of drug to target PBPs  
c. Presence of an efflux pump  
d. Inactivation of antibiotics by  $\beta$  lactamase
5. All of the following are recognised adverse effects of isoniazid expect ( )  
a. Hepatitis b. Peripheral neuropathy  
c. Retrobulbar neuritis d. CNS toxicity
6. Regarding fluoroquinolones ( )  
a. Ciprofloxacin is ineffective in the treatment of gonococcus  
b. Norfloxacin and Ciprofloxacin are predominantly faecally excreted  
c. Norfloxacin and Ciprofloxacin have long half lives (12 hours)  
d. May damage growing cartilage in children less than 18 years of age
7. Vancomycin ( )  
a. Is never orally administered as it is poorly absorbed from the GIT  
b. Binds to the 30S unit on the ribosome and inhibits protein synthesis  
c. 60% of vancomycin is excreted by glomerular filtration  
d. Adverse reactions to vancomycin are encountered in about 10% of patients
8. Regarding the "azole" group of antifungals ( )  
a. Fluconazole has low water solubility  
b. Ketoconazole may be given IV/PO  
c. Itraconazole undergoes renal elimination  
d. They work by reduction of ergosterol synthesis by inhibition of fungal cytochrome  $P_{450}$  enzymes
9. The fluoroquinolones ( )  
a. May be administered to patients with severe campylobacter infection  
b. Work by inhibiting dihydrofolate reductase  
c. Have little effect against gram positive organisms  
d. Are safe to give to breast feeding mothers
10. Clindamycin ( )  
a. Inhibits bacterial cell wall synthesis  
b. Is often used for prophylaxis of endocarditis in patients with Valvular disease who are undergoing dental procedures  
c. Penetrates through BBB into CSF well  
d. Works well against enterococci and gram negative aerobic organisms
11. Which of the following is a second generation cephalosporin ( )  
a. Ceftazidime b. Cephalothin c. Cefotaxime d. Cefaclor



- is hepatic microsomal enzymes ( )
- inhibits DNA synthesis
- is bactericidal for mycobacteria
- is not appreciably protein bound
- Regarding resistance to antibiotics ( )
- a. Penicillinases cannot inactivate cephalosporins
- b. Macrolides can be inactivated by transferases
- c. Mutation of aminoglycoside binding site is its main mechanism of resistance
- d. Tetracycline resistance is a marker for multidrug resistance
16. Concerning toxicity of antibiotics ( )
- a. Enamel dysplasia is common with aminoglycosides
- b. Grey Baby Syndrome occurs with rifampicin use
- c. A disulfiram like reaction can occur with macrolides
- d. Haemolytic anaemias can occur with sulphonamide use
17. Which of the following is considered to be bacteriostatic? ( )
- a. Penicillin b. Chloramphenicol c. Ciprofloxacin d. Cefoxitin
18. Half life of amphotericin B is ( )
- a. 2 seconds b. 20 minutes c. 2 hours d. 2 weeks
19. Regarding antiseptic agents – all of the following are true EXCEPT ( )
- a. Sodium hypochlorite is an effective antiseptic for intact skin
- b. Potassium permanganate is an effective bactericidal agent
- c. Formaldehyde may be used to disinfect instruments
- d. Chlorhexidine is active against gram positive cocci
20. Ciprofloxacin ( )
- a. Is a defluorinated analogue of nalidixic acid
- b. Inhibits topoisomerases 2 and 3
- c. Has no gram positive cover
- d. Has bioavailability of 30%
21. Flucloxacillin ( )
- a. Is ineffective against streptococci
- b. Is active against enterococci and anaerobes
- c. Blocks transpeptidation and inhibits peptidoglycan synthesis
- d. Is poorly absorbed orally
22. Aminoglycosides ( )
- a. Have a  $\beta$  lactam ring
- b. Can produce neuromuscular blockade
- c. Are DNA gyrase inhibitors
- d. Normally reach high CSF concentrations
23. Ribosomal resistance occurs with ( )
- a. Sulphonamides b. Penicillin c. Fluoroquinolones d. Macrolides
24. Regarding antivirals ( )
- a. Delvirdine is a nucleoside reverse transcriptase inhibitor (NRTI)
- b. Zidovudine (AZT) is a non nucleoside reverse transcriptase inhibitor (NNRTI)
- c. NRTIs activate HIV-1 reverse transcriptase
- d. NRTIs require intracytoplasmic activation to the triphosphate form
25. All of the following are true regarding metronidazole EXCEPT ( )

used to treat giardia  
causes a metallic taste in the mouth  
it inhibits alcohol dehydrogenase  
It is used to treat gardnerella

Which of the following disease caused by Chlamydia

- a. Syphilis b. Gonorrhea c. Chancroid d) plaque ( )

27. Allopurinol inhibits

- a. Azathioprine metabolism b. Cyclosporin metabolism ( )  
c. Cyclosporin absorption d. Azathioprine absorption

28. Antidote for acute morphine poisoning

- a. Amantidine b. Stavudine c. Nevirapine d. Naloxone ( )

29. Which of the following drugs can stain soft contact lenses

- a. Azithromycin b. Ciprofloxacin c. Rifampicin d. Streptomycin ( )

30. Non-nucleotide reverse transcriptase inhibitor

- a. zalcitabine b. Nevirapine c. Indinavir d. all ( )

31. Thymine is used in

- a. Scurvy b. Rickets c. Anaemia d. Beriberi ( )

32. Pilocarpine is used in the treatment of

- a. UTI b. Glaucoma c. Asthma d. CHF ( )

33. Short acting Barbiturate is

- a. Amobarbital b. Phenobarbital c. Pentobarbital d. Hexobarbital ( )

34. Example for calcium channel blocker

- a. Enalapril b. Adrenaline c. Nifedipine d. Atenolol ( )

35. Antiulcer drugs that can eradicate Helicobacter pylori

- a. Sucralfate b. colloidal bismuth c. H<sub>2</sub> blockers d. Anticholinergics ( )

36. Ondansetron (Zofran) probably mediates its antiemetic effects by interacting with this receptor system ( )

- a. serotonergic b. Cholinergic c. Muscarinic d. Histamine

37. Choose the correct statement from the following about  $\alpha_1$ -adrenergic receptor agonists ( )

- a. Norepinephrine > isoproterenol > epinephrine  
b. Norepinephrine < epinephrine > isoproterenol  
c. Epinephrine  $\geq$  norepinephrine >> isoproterenol  
d. Epinephrine > isoproterenol > norepinephrine

38. Which one of the following pairs of drug indication is accurate ( )

- a. Amphetamine: Alzheimer's dementia b. Bupropion: Acute anxiety  
c. Fluoxetine: Insomnia d. Ropinirole: Parkinson's disease

39. Teratogenic vitamin is

- a. Vit. K b. vit A c. Vit C d. Vit D ( )

40. Bisacodyl frequently can cause

- a. Abdominal cramps (b) Constipation (c) Skin rashes (d) Dizziness ( )

41. Ethambutol is not used in children below 6 years of age because ( )

- a. Young children are intolerant to ethambutol  
b. It is difficult to detect ethambutol induced visual impairment in young children  
c. In young children visual toxicity of ethambutol is irreversible  
d. Ethambutol causes growth retardation in young children

42. the most important complication of streptokinase therapy is ( )

- a. Hypotension (b) Bleeding (c) Fever (d) Anaphylaxis

43. Which of the following can be used to antagonize the action of heparin in case of overdose ( )

- a. Heparin sulfate b. Dextran sulfate c. Protamine sulfate d. Ancrod

44. Which one of the following statements best describes the mechanism of action of benzodiazepines ( )

- a. Benzodiazepines activate GABA B receptors in the spinal cord  
b. Their inhibition of GABA transaminase leads to increased levels of GABA  
c. Benzodiazepines block glutamate receptors in hierarchical neuronal pathways

brain

increase the frequency of opening of chloride ion channels that are coupled to GABAA receptors.

route of heparin administration is

- a. Oral      b. Subcutaneous      c. Intramuscular      d. Sublingual      ( )

The emetic action of morphine is due to

- a. Irritation of gastrointestinal tract      ( )

b. Stimulation of cerebral cortex

c. Stimulation of medullary vomiting center

d. Stimulation of emetic chemoreceptor trigger

47. Tetracycline is stored in the body in

- a. Protein bound form      b. In hairs, nails and skin      ( )

c. In muscular tissues

d. In bones

48. Chloramphenicol is the drug of choice in

- a. Staphylococcal infection      b. Salmonella infection      ( )

c. Viral infection

d. Amoebic dysentery

49. The semisynthetic penicillin which is destroyed by acid is

- a. Phenoxymethyl penicillin      b. Ampicillin      ( )

c. Carbenicillin

d. Coxacillin

50. Which of the following is a steroidal antibiotic

- a. Nalidixic acid      b. Fusidic acid      ( )

c. Spectinomycin

d. Nitrofurantoin

VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH  
GPAT – 2015

Sub: Pharmacology-II  
MCQs – Answers

Date: 09-10-2015

1. d
2. c
3. d
4. d
5. c
6. d
7. d
8. d
9. a
10. b
11. d
12. b
13. a
14. c
15. c
16. d
17. b
18. d
19. a
20. d
21. c
22. b
23. d
24. d
25. c
26. a
27. c
28. a
29. c
30. b
31. c
32. b
33. c
34. c
35. b
36. a
37. a
38. d
39. b
40. a
41. b
42. b
43. c
44. d
45. b
46. d
47. d

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**ATTENDANCE LIST-GPAT 2023**

Subject: Pharmacology

Date: 18.11.2022

**Students Attendance & Marks Sheet**

| S.No. | Roll No.   | Name of the Student    | Signature     |
|-------|------------|------------------------|---------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   | Harshitha     |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh        |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani       |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha      |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishnavi     |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi   |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chandana      |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai Kiran     |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor          |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar     |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajya Lakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep       |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya     |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina Sar     |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya        |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath       |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi     |

  
Signature of the GPAT coordinator

VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION&RESEARCH

VISHNUPUR, NARSAPUR, MEDAK Dt-502313

GPAT (2023) Practice Exam – III

Subject : Pharmaceutics (Semisolids)

Time : 1hr

Date : 27.10.2022

Name :

Regd No:

- 
- 1) In the preparation of ointments, macragols are used as ( )  
(A) Water soluble base (B) Hydrocarbon base  
(C) Oleagenous base (D) Absorption base
- 2) List of Hydrocarbon bases used in ointment preparations given below, EXCEPT: ( )  
(A) Petrolatum USP (B) White ointment USP  
(C) Simple ointment USP (D) Hydrophilic petrolatum USP
- 3) List of absorption bases used in ointment preparations is given below, EXCEPT: ( )  
(A) Hydrophilic petrolatum USP (B) Hydrophilic ointment USP  
(C) Lanolin (D) Cold cream
- 4) In the preparation of ointments, water washable bases may also called ( )  
(A) Water removable bases (B) Cosmetic creams  
(C) O/W Emulsion (D) All of the above
- 5) Which of the following ointment bases may also called greaseless bases ( )  
(A) Water removable bases (B) Hydrocarbon bases  
(C) Absorption bases (D) Water soluble bases
- 6) Lanolin is the trade name for ( )  
(A) Anhydrous wool fat (B) Hydrous wool fat  
(C) Hydrous petrolatum (D) Emulsified beeswax
- 7) The mixture of 30% water and 70% wool fat is available as ( )  
(A) Emulsified wax (B) Lanolin  
(C) Arlacel (D) Macrogol
- 8) Which of the following ointment bases has significant 'Emollient' property ( )  
(A) Hydrocarbon bases (B) Water soluble bases  
(C) Absorption bases (D) Water removable bases
- 9) The superficial skin layer, stratum corneum may also be known as ( )  
(A) Horny layer (B) Lucidum layer  
(C) Spinosum layer (D) Basale layer
- 10) Drug penetration through skin can be enhanced by addition of penetration enhancers, which are ( )  
(A) Water miscible organic solvents (B) Anionic surfactants  
(C) Emollients (D) All of the above

- 11) Absorption bases are also known as ( )  
 (A) O/W emulsion bases (B) W/O Emulsion bases  
 (C) Greaseless bases (D) Cosmetic creams
- 12) The role of borax in cold cream is ( )  
 (A) Antimicrobial agent (B) to provide fine particles to polish skin  
 (C) In - situ emulsifier (D) Antioxidant
- 13) Gels often contract on standing and some of the interstitial liquid is squeezed out. This phenomenon, called ( )  
 (A) Syneresis (B) Imbibition  
 (C) Clotting (D) Bleeding
- 14) Inorganic gels (approximately) may also be known as ( )  
 (A) Magmas (B) Spherulites  
 (C) Hydrates (D) Bougies
- 15) Which one of the following statements is WRONG with respect to the Gels ( )  
 (A) Organic gels can be characterized as one - phase systems  
 (B) Inorganic gels can be characterised as two - phase systems  
 (C) Inorganic gels may also be known as magmas (or) milk  
 (D) Organic gels may also be known as magmas (or) milk
- 16) When gels are placed in contact with liquid medium it takes up the liquid without a measurable increase in volume. This phenomenon is known as, ( )  
 (A) Syneresis (B) Imbibition  
 (C) Swelling (D) Bleeding
- 17) Pick out the primary emulsifier in the cold cream out of the following ( )  
 (A) Glyceryl mono stearate (B) Potassium stearate  
 (C) Sodium lauryl sulfate (D) Stearyl alcohol
- 18) Pick out the Auxiliary emulsifier in the cold cream out of the following ( )  
 (A) Glyceryl mono stearate (B) Borax  
 (C) Cetyl alcohol (D) Stearyl alcohol
- 19) The role of borax in the formulation of cold cream is ( )  
 (A) It acts as an alkali and reacts with cerotic acid forming sodium cerotate  
 (B) Sodium cerotate is a hydrophilic surfactant and is an o/w emulsifier  
 (C) Sodium cerotate enhances hydrophilicity and helps to form internal phase  
 (D) All the above
- 20) Which of the following ointment bases cannot be used as an emollient ( )  
 (A) Hydrocarbon bases (B) Absorption bases  
 (C) Oleagenous bases (D) Water miscible bases
- 21) Which of the following bases forms o/w emulsion based semisolids ( )  
 (A) Hydrocarbon bases (B) Absorption bases  
 (C) Oleagenous bases (D) Water washable bases
- 22) Pick out the odd one out of the following ( )  
 (A) Water soluble bases (B) Water miscible bases  
 (C) Water removable bases (D) Water washable bases
- 23) Glycerin is used as a humectant in the following formulation. Pick out the correct answer ( )  
 (A) Vanishing cream (B) Cold cream  
 (C) Hydrophilic ointment USP (D) White ointment

- 24) Which of the following is not a cosmetic cream ( )  
 (A) Cold cream (B) Vanishing cream  
 (C) Barrier cream (D) Foundation cream
- 25) In which of the following lipophilic surfactant is a primary emulsifier ( )  
 (A) Cold cream (B) Vanishing cream  
 (C) Hydrophilic ointment USP (D) Foundation cream
- 26) What is the disadvantage associated with vanishing cream ( )  
 (A) They present the difficulty in the removal of the greasy layer  
 (B) They present the difficulty to dissipate the heat to the surroundings  
 (C) They contribute to the uncomfortable feeling of warmth sensation  
 (D) The bases cannot hold the drug for a long period of time
- 27) In which of the following hydrophilic surfactant is an auxiliary emulsifier ( )  
 (A) Cold cream (B) Vanishing cream  
 (C) Hydrophilic ointment USP (D) Foundation cream
- 28) Propylene glycol is used as an humectant in the following formulation. Pick out the correct choice ( )  
 (A) Vanishing cream (B) Cold cream  
 (C) Hydrophilic ointment USP (D) White ointment
- 29) In which of the following SLS is used as a primary emulsifier that acts as a stabilizer ( )  
 (A) Vanishing cream (B) Cold cream  
 (C) Hydrophilic ointment USP (D) Simple ointment
- 30) In which of the following bases there are no water insoluble components ( )  
 (A) Water soluble bases (B) Water miscible bases  
 (C) Water removable bases (D) Water washable bases
- 31) PEG ointment USP contains which of the following bases ( )  
 (A) Water soluble bases (B) Water miscible bases  
 (C) Water removable bases (D) Water washable bases
- 32) The composition of PEG ointment USP is ( )  
 (A) 100 % PEG 4000 (B) 75 % PEG 4000 & 25 % PEG 400  
 (C) 30 % PEG 4000 & 70 % PEG 400 (D) 95 % PEG 4000 & 5 % PEG 400
- 33) Which of the following can be used as an emollient ( )  
 (A) Cold cream (B) Vanishing cream  
 (C) Hydrophilic ointment USP (D) Foundation cream
- 34) Which of the following is free from greasy behaviour upon application ( )  
 (A) Hydrocarbon bases (B) Absorption bases  
 (C) Oleagenous bases (D) Water washable bases
- 35) Edible oil can be used as an ointment base. It is a representative of ( )  
 (A) Water soluble bases (B) Absorption bases  
 (C) Oleagenous bases (D) Water washable bases
- 36) Which of the following fixed oil contains ricinoleic acid ( )  
 (A) Castor oil (B) Almond oil  
 (C) Olive oil (D) Cotton seed oil
- 37) Any polymeric matrix containing liquid phase represents ( )  
 (A) Ointments (B) Pastes  
 (C) Creams (D) Gels



- 38) Which of the following is not a hydro gel ( )  
 (A) Gelatin gel (B) Acacia gel  
 (C) Methylcellulose gel (D) Nitrocellulose gel
- 39) Which of the following is a semi synthetic gelling agent ( )  
 (A) Gelatin (B) Aluminium hydroxide  
 (C) Methylcellulose (D) Povidone
- 40) Out of the following one is a synthetic gelling agent. Select the right choice ( )  
 (A) Gelatin (B) Acacia  
 (C) Methylcellulose (D) Povidone
- 41) Which of the following is considered as a thermal polymer ( )  
 (A) Gelatin (B) Acacia  
 (C) Methylcellulose (D) Povidone
- 42) Carbomer is used as a gelling agent in the preparation of a gel. It is classified as a ( )  
 (A) Natural gelling agent (B) Synthetic gelling agent  
 (C) Semi synthetic gelling agent (D) Inorganic gelling agent
- 43) Which of the following is a polymer of acrylic acid ( )  
 (A) Gelatin (B) Polyvinyl alcohol  
 (C) Sodium CMC (D) Carbopol
- 44) Which of the following gelling agents cannot form a homogeneous gel ( )  
 (A) Natural gelling agent (B) Synthetic gelling agent  
 (C) Semi synthetic gelling agent (D) Inorganic gelling agent
- 45) Which of the following is widely used in the formulation of clear gels ( )  
 (A) Gelatin (B) Polyvinyl alcohol  
 (C) Sodium CMC (D) Carbopol or carbomer
- 46) Which of the following is a pH dependent polymer useful as a gelling agent in the formulation of a gel. ( )
- 47) (A) Gelatin (B) Povidone  
 (C) Methyl cellulose (D) Carbopol or carbomer

## Key to Semisolids- Ointments, Pastes, Creams & Gels

|         |         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. [A]  | 2. [D]  | 3. [B]  | 4. [D]  | 5. [D]  | 6. [B]  | 7. [B]  | 8. [A]  | 9. [A]  | 10. [D] |
| 11. [B] | 12. [C] | 13. [A] | 14. [A] | 15. [D] | 16. [B] | 17. [A] | 18. [B] | 19. [D] | 20. [D] |
| 21. [D] | 22. [A] | 23. [A] | 24. [A] | 25. [A] | 26. [D] | 27. [A] | 28. [C] | 29. [C] | 30. [A] |
| 31. [A] | 32. [B] | 33. [A] | 34. [D] | 35. [C] | 36. [A] | 37. [D] | 38. [D] | 39. [C] | 40. [D] |
| 41. [C] | 42. [B] | 43. [D] | 44. [D] | 45. [D] | 46. [D] |         |         |         |         |

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**ATTENDANCE LIST-GPAT 2023**

Subject: Pharmacaceutics

Date: 27.10.2022

**Students Attendance & Marks Sheet**

| S.No. | Roll No.   | Name of the Student    | Signature    |
|-------|------------|------------------------|--------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   | Harshitha    |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh       |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani      |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha     |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishnavi    |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chandana     |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai Kiran    |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor         |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar    |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajyalakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep      |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina Sar    |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya       |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath      |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi    |

  
Signature of the GPAT coordinator

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION&RESEARCH**

**VISHNUPUR, NARSAPUR, MEDAK Dt-502313**

**GPAT (2023) Practice Exam – II**

**Subject : Pharmaceutics**

**Time : 1hr**

**Date : 23.09.2022**

**Name :**

**Regd No:**

---

**1) The temperature at which the solution of an emulsifier becomes turbid, known as**

- |                     |                 |
|---------------------|-----------------|
| (A) Kraft point     | (B) Flash point |
| (C) Fragility point | (D) Cloud point |

**2) Read the following statements about kraft point**

**[P]: At kraft point, solubility of the surfactant equals the CMC[Q]:**

**Below kraft point, micelles will not form**

**[R]: Kraft point increases with increasing chain length of hydrocarbon[S]:**

**Kraft point is normally exhibited by non-ionic surfactants**

**Choose the correct combination of answers:**

- (A) P is correct but Q, R & S are wrong  
(B) R & S are correct but P & Q are wrong  
(C) P, Q & R are correct but S is wrong  
(D) P, Q, R & S all are correct

**3) Read the following statements about critical micelle concentration (CMC):[P]: surface tension decreases up to the CMC**

**[Q]: Above the CMC, the surface tension remains essentially constant[R]:**

**Above the CMC, the osmotic pressure is essentially constant**

**[S]: CMC in an aqueous media decreases as the lipophilic nature of the surface active agent increases**

**Choose the correct answer**

- (A) P, Q, R and S all are true  
(B) P is true but Q, R & S are false  
(C) S is false but Q, R & S are true  
(D) P, Q, R and S all are false

**4) The number of surface active agent molecules constituting a spherical micelle is believed to range from**

- |                   |                  |
|-------------------|------------------|
| (A) 50 (or) more  | (B) 80 (or) more |
| (C) 100 (or) more | (D) 20 (or) more |

**5) Statement [X]: The number of surface active agent molecules constituting a micelle is believed to range from 50 to 100 and is characterized by the aggregation number.**

**Statement [Y]: When the concentration of spherical micelles exceeds they are believed to transform into lamellar micelles.**

**Choose the correct Answer**

- (A) X & Y both are correct  
(B) X is correct but Y is incorrect  
(C) Y is correct but X is incorrect  
(D) Both X&Y are incorrect

According to Stoke's Law, the sedimentation velocity of the suspended particles depends upon

- (A) Diameter of the suspended particle
- (B) Difference in densities between suspended particle & liquid medium
- (C) Viscosity of the liquid medium
- (D) All of the above

- 7) Structured vehicles used in suspension formulation may also be referred as
- (A) Suspending agents
  - (B) Protective colloids
  - (C) Thickening agents
  - (D) All of the above

- 8) The structured vehicles used in ideal suspensions should possess rheological behaviour of
- (C) Thixotropic as well as dilatant
  - (D) Rheopectic as well as plastic
  - (E) Thixotropic as well as pseudo plastic
  - (F) Rheopectic as well as pseudo plastic

- 9) Pharmaceutically acceptable suspension should possess
- (D) Sedimentation volume equal or near to 1
  - (E) Volume of sediment equal or near to 1
  - (F) Degree of flocculation equal or near to zero
  - (G) All of the above

- 10) The degree of flocculation of a suspension is 1.5 and ultimate volume of deflocculated sediment is 0.75. What will be ultimate volume of deflocculated sediment?
- (A) 2.1
  - (B) 1.5
  - (C) 0.7
  - (D) 0.5

- 11) The kinetics of degradation of drugs in suspension can be described as a
- (A) Zero - order
  - (B) Apparent zero - order
  - (C) First - order
  - (D) Apparent second - order

- 12) The sedimentation volume of flocculated and deflocculated suspension is 0.9 and 0.3 respectively. What will be the Degree of flocculation?
- (A) 0.30
  - (B) 0.50
  - (C) 0.75
  - (D) 1.00

- 13) The type of emulsion is a function of the relative solubility of the surfactant, the phase in which it is more soluble being the continuous phase, this is sometimes referred to as the
- (B) Schulze - Hardy rule
  - (B) Bancroft rule
  - (C) Traube's rule
  - (D) Phase rule

- 14) Emulsifiers assist in the formation of emulsions by three mechanisms, EXCEPT:
- (C) Formation of monomolecular film around each dispersed globule
  - (D) Formation of multimolecular film around each dispersed globule
  - (E) Formation of particulate film around each dispersed globule
  - (F) Formation of atomic film around each dispersed globule

- 15) List of cationic surfactants are given below, EXCEPT :
- (G) Benzalkonium chloride
  - (H) Cetylpyridinium chloride
  - (I) Cetyl trimethyl ammonium bromide
  - (J) Sodium lauryl sulphate

span (Arlacel) is trade name for

- (K) Sodium dioctyl sulfo succinate
- (B) Sodium dodecyl sulfate
- (C) Sarcosinates
- (D) Sorbitan esters

17) BRIJ is tradename for

- (L) Polyethylene glycol
- (M) Polyoxy ethylene alkyl ethers
- (N) Polyoxy ethylene alkyl esters
- (O) Alkoxy alkyl amines

18) 70% SPAN 60 (HLB=4.7) and 30% Tween 80 (HLB=15) are mixed to yield an emulsifier exhibiting an average HLB value of

- (P) Approx. 8
- (B) Approx. 10
- (C) Approx. 5
- (D) Approx. 2

19) Emulsifying Wax B.P is a blend of

- (Q) Petrolatum & white wax
- (R) Sodium lauryl sulphate & cetostearyl alcohol
- (S) Dioctyl sulfosuccinate & white wax
- (T) Petrolatum & polyethylene

20) Emulsifying wax B.P favours

- (U) O/W Emulsion
- (B) W/O Emulsion
- (V) Poor Emulsion
- (D) All of the above

21) In stable emulsion, spherical droplets as internal phase can occupy not more than \_\_\_\_ of the total volume of an emulsion

- (A)  $\approx 74\%$
- (B)  $\approx 50\%$
- (C)  $\approx 25\%$
- (D)  $\approx 45\%$

22) Emulsion with a dispersed phase concentration (PVT) in excess of \_\_\_\_ has a marked tendency to crack

- (A) 74%
- (B) 26%
- (C) 50%
- (D) 10%

23) The phase volume ratio (PVT) of most stable emulsion is

- (A) 74:26
- (B) 26:74
- (C) 50:50
- (D) 74:100

24) Antifoaming agents have an HLB value about

- (A) 1-3
- (B) 7-9
- (C) 8-16
- (D) 3-8

25) What will be the proportion of oil, water & gum respectively required to prepare a primary emulsion containing mineral oil

- (A) 4:2:1
- (B) 3:2:1
- (C) 2:2:1
- (D) 1:2:1

26) When a stoichiometric amount of Ca is added to an emulsion stabilized with sodium alginate it will

- (W) Crack immediately
- (X) Change the nature from o/w to w/o
- (Y) Change the nature from w/o to o/w
- (Z) Accelerate the phenomenon of Ostwald ripening

Addition of electrolyte to a Lysol may cause

- (A) Tyndall effect
- (C) Coagulation

- (B) Salting out
- (D) Dilution

28) Rx

Calciferol solution                      0.3ml  
Water q.s ad                              25ml

The above prescription can be dispensed as

- (A) Solution
- (C) Emulsion

- (B) Elixir
- (D) Suspension

29) At low concentration natural gums, proteins & particulate solids are useful as

- (A) Primary emulsifiers
- (C) In-situ emulsifiers

- (B) Auxiliary emulsifiers
- (D) Mixed emulsifiers

30) Macrogol is the trade name for

- (A) Dioctyl sulfosuccinate
- (C) Poly propylene

- (B) Polyethylene glycol
- (D) Poly acrylic acid

31) Aerosol OT is the trade name for

- (AA) Sodium dioctyl sulphosuccinate
- (BB) Sodium dodecyl sulphate
- (CC) Sodium alginate
- (DD) Sodium aluminium silicate

32) List of o/w Emulsifiers are given below, EXCEPT:

- (A) TWEEN / Polysorbate
- (C) PEG / Mucrogol

- (B) Pluronics / Poloxamer
- (D) Span / Arlacel

33) Which of the following statement is WRONG with respect to the colloidal dispersion

- (A) It is an example of heterogeneous dispersion
- (B) Do not pass through semipermeable membrane
- (C) Visible in electron microscope
- (D) Do not exhibit Brownian motion

34) An Ideal semipermeable membrane used in Haemodialysis technique is

- (E) Cellophane
- (C) Hypromellose
- (B) Cellulose acetate
- (D) Carboxymethyl cellulose sodium

35) Which of the following statements is FALSE with respect to Dialysis

- (F) Principle utilized in the artificial kidney
- (G) Removes low-molecular-weight impurities from the body
- (H) Separates soluble impurities and purifies colloidal materials
- (I) May also be known as Ultrafiltration

36) Read the following statements about lyophilic sol

[P] : Lyophilic sols may also be known as reversible sols

[Q] : Lyophilic sols are relatively stable in presence of moderate amounts of electrolytes

[R] : Lyophilic sols may also be known as emulsoids

[S] : Lyophilic sols may be salted out by high concentrations of very soluble electrolytes

Choose the correct combination of statements

(A) P, Q, R & S all are false

(B) P & Q are false and R & S are true

(C) P & S are false and Q & R are true

(D) P, Q, R & S all are true

37) Statement [x]: Hofmeister series grades coagulation power of electrolytes as per their ionic size

Statement [y]: The relative coagulating power is given by:

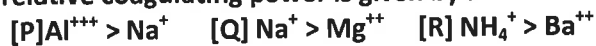


Choose the correct statement:

- (J) Only X is correct (B) Only Y is correct  
(C) Both X & Y are correct (D) Both X & Y are incorrect

38) Statement [x]: Schulze-Hardy rule grades coagulating power of electrolyte as per their valency

Statement [y]: The relative coagulating power is given by:



Choose the correct statement:

- (K) [x] is true but P, Q & R are false in [y]  
(L) [x] is false and P, Q & R are false in [y]  
(M) [x] is true and Q, R are false in [y]  
(N) [x] is false and P only false in [y]

39) Which one of the following is a flocculating agent for a negatively charged drug?

- (O) Aluminium chloride (B) Bentonite  
(C) Tragacanth (D) Sodium bi phosphate

40) Which one of the following is a flocculating agent for a negatively charged drug?

- (P) NaCl (B)  $\text{CaCl}_2$   
(C)  $\text{AlCl}_3$  (D) Kaolin



# Key to Suspensions & Emulsions

|         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 1. [D]  | 2. [D]  | 3. [A]  | 4. [A]  | 5. [A]  |
| 6. [D]  | 7. [D]  | 8. [C]  | 9. [A]  | 10. [D] |
| 11. [B] | 12. [A] | 13. [B] | 14. [D] | 15. [D] |
| 16. [D] | 17. [B] | 18. [A] | 19. [B] | 20. [A] |
| 21. [A] | 22. [A] | 23. [C] | 24. [A] | 25. [B] |
| 26. [C] | 27. [B] | 28. [C] | 29. [B] | 30. [B] |
| 31. [A] | 32. [D] | 33.D    | 34.A    | 35.D    |
| 36.D    | 37.C    | 38.C    | 39.A    | 40.C    |
|         |         |         |         |         |
|         |         |         |         |         |
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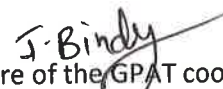
**ATTENDENCE LIST-GPAT 2023**

Subject: Pharmaceutics

Date: 23.09.2022

**Students Attendance & Marks Sheet**

| S.No. | Roll No.   | Name of the Student    | Signature    |
|-------|------------|------------------------|--------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   | Harshitha    |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh       |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani      |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha     |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishvi      |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chandana     |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai          |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor         |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar    |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajyalakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep      |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina        |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya       |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath      |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi    |

  
Signature of the GPAT coordinator

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION&RESEARCH**  
**VISHNUPUR, NARSAPUR, MEDAK Dt-502313**

**GPAT (2023) Practice Exam – I**

**Subject : Pharmaceutical Organic Chemistry**

**Time : 1hr**

**Date : 20.08.2022**

**Name :**

**Regd No:**

- 
1. 2,6,8-Tri hydroxypurine is known as ( )  
a) Caffeine b) Uric acid c) Theophylline d) Theobromine
  2. 2,6-di hydroxy purine is known as ( )  
a) Xanthine b) Uric acid c) Theophylline d) Theobromine
  3. 1,3,7-Tri methyl xanthine is known as ( )  
a) Caffeine b) Theobromine c) Theophylline d) Uric acid
  4. 3,7-di methyl xanthine is known as ( )  
a) Caffeine b) Theobromine c) Theophylline d) Uric acid
  5. 1,3-di methyl xanthine is known as ( )  
a) Caffeine b) Theobromine c) Theophylline d) Uric acid
  6. DNA mainly present in----- ( )  
a) Chromatin of cell nucleus b) Cell cytoplasm c) Mitochondria d) All
  7. RNA mainly present in----- ( )  
a) Chromatin of cell nucleus b) Cell cytoplasm c) Mitochondria d) All
  8. Sugars in Nucleic acids are present in-----form and in -----configuration ( )  
a) Furanose form & beta configuration b) Pyranose form & beta configuration  
c) Furanose form & Alpha configuration d) Pyranose form & Alpha configuration
  9. In Nucleoside sugar and base linked at ----- positions ( )  
a) C-1 of sugar & N-9 ( Purine), N-1 ( Pyrimidine)  
b) C-2 of sugar & N-9 ( Purine), N-1 ( Pyrimidine)  
c) C-1 of sugar & N-9 ( Pyrimidine), N-1 ( Purine)  
d) C-1 of sugar & N-1 ( Purine), N-9 ( Pyrimidine)
  10. Nucleotide is ----- ( )  
a) Sugar b) Sugar + base c) Sugar + base + phosphoric acid d) Phosphoric acid
  11. Nucleoside is ----- ( )  
a) Sugar b) Sugar + base c) Sugar + base + phosphoric acid d) Phosphoric acid
  12. In Pyridine Electrophilic substitution reactions are take place at----- positions ( )  
a) 3,5 b) 2,4,6 c) 2,4 d) 1,2,3
  13. In Pyridine Nucleophilic substitution reactions are take place at----- positions ( )  
a) 3,5 b) 2,4,6 c) 2,4 d) 1,2,3

14. Characteristic reactions of pyrrole( )

- a) Electrophilic substitution reactions b) Nucleophilic substitution reactions c) both d) None

15. A) Pyridine undergoes Nucleophilic substitution reactions readily than Electrophilic substitution reactions.

B) Why because Nitrogen present in pyridine more electronegative in nature it pull the electrons towards it. So electron deficiency inside the ring.

- a) A&B Correct b) A&B Wrong c) A Correct & B Wrong d) B Correct & A Wrong ( )

16. Why Pyrrole is weak base----- ( )

a) Electron pair present on nitrogen involved in the Aromatic sextet

b) Electrons are absent c) It doesnot react with acids d) All

17. In Pyrrole Electrophilic substitution reactions are take place at----- positions ( )

- a) 1 b) 2,3,4,5 c) both d) None

18. Pyridine is ----- nature ( )

- a) Acidic b) Basic c) Neutral d) All

19. Partially reduced pyrrole is known as( )

- a) Pyrroline b) Pyrrolidine c) both d) None

20. Fully reduced Pyridine is known as ( )

- a) Pyrroline b) Pyrrolidine c) Piperidine d) None

21. Ketoximes on treatment with an acid catalyst and undergo a rearrangement to form N-substituted amides. This reaction is known as----- ( )

- a) Beckmann rearrangement b) Lossen rearrangement c) Curtius rearrangement d) None

22. Nitration of pyrrole is carried out with----- reagent ( )

- a)  $\text{HNO}_3 + \text{H}_2\text{SO}_4$  b)  $\text{H}_2\text{SO}_4$  c)  $\text{HNO}_3 + \text{AC}_2\text{O}$  d) None

23. Sulphonation of pyrrole is carried out with----- reagent ( )

- a)  $\text{HNO}_3 + \text{H}_2\text{SO}_4$  b)  $\text{H}_2\text{SO}_4$  c)  $\text{HNO}_3 + \text{AC}_2\text{O}$  d) Pyridinium sulphur trioxide complex

24. Reduction of aromatic rings by means of alkali metals in liquid ammonia or amines with ethanol to give mainly unconjugated dihydroderivatives is known as----- ( )

- a) Beckmann rearrangement b) Lossen rearrangement c) Curtius rearrangement d) Birch reduction

25. Compound containing atleast one active hydrogen atom condenses with formaldehyde and primary or secondary amine or ammonia to give the product this reaction is known as( )

- a) Mannich reaction b) Schmidt reaction c) Curtius rearrangement d) Birch reduction

26. Reaction of pyridine with sodamide to give the product 2-amino pyridine this reaction is known as

- a) Mannich reaction b) Schmidt reaction c) Curtius rearrangement d) Chichibabin reaction( )

27. Addition reaction between an  $\alpha, \beta$ -unsaturated carbonyl compound and a compound with an active methylene group in presence of a base. This reaction is known as----- ( )

- a) Mannich reaction b) Michael addition reaction c) Curtius rearrangement d) Chichibabin reaction

28. Separation of Individual enantiomers from a racemic mixture is known as-( )  
a) Resolution b) Modification c) racemicifation d)all
29. R,S-Configuration is also known as--- ( )  
a) Absolute configuration b) cann-ingold-prelog system c) Relative configuration d) b&c
30. D,L-Configuration is also known as--- ( )  
a) Absolute configuration b) cann-ingold-prelog system c) Relative configuration d) None
31. Arrange the following heterocycles based on aromaticity. ( )  
a) Pyrrole>Thiophene>Furan b) Furan>Pyrrole>Thiophene c)Pyrrole<Thiophene>Furan d) None
32. The basic structural unit in chlorophyll is---- ( )  
a)Pyrrole b) Thiophene c) Furan d) None
33. Isomers which are not mirror images of each other are called as-----
34. Isomers which are mirror images of each other are called as-----
35. In furan,C& O are in ----- state of hybridization.( )  
a) SP b)  $SP^2$  c) $SP^3$  d) None
36. Thiophene undergoes nitration to form------( )  
a) 2-Nitro Thiophene b) 2,5-Di Nitro thiophene c) Both d) None
37. Nitrofurantoin, a urinary antiseptic contains which type of nucleus----- ( )  
a)Pyrrole b) Thiophene c) Furan d) None
38. Isoquinoline reacts with alkaline  $KMnO_4$  to form----- ( )  
a) Phthalicacid b) Pyridine 3,4-carboxylic acid c) both d) none
39. The tetrahydro derivatives of azoles are known as------( )  
a) Azolidine b) Azoline c) Azolyl d) None
40. Priorities to substituents is assigned according to -----in R & S system.( )  
a) Atomic weight b) Atomic number c) both d) None

**key:-**

- 1)b
- 2)a
- 3)a
- 4)b
- 5)c
- 6)a
- 7)b
- 8) a
- 9)a
- 10)c
- 11)b
- 12)a
- 13)b
- 14)a
- 15)a
- 16)a
- 17)b
- 18)b
- 19)a
- 20)b
- 21)a
- 22)c
- 23)d
- 24)d
- 25)a
- 26)d
- 27)b

- 28)a
- 29)d
- 30)a
- 31) a
- 32) a
- 33) Diastereomers
- 34) Enantiomers
- 35) b
- 36) c
- 37)c
- 38)c
- 39)a
- 40)b

VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH  
Narsapur, Medak Dist. – 502313

ATTENDANCE LIST-GPAT 2023

Subject: Organic Chemistry

Date: 20.08.2022

Students Attendance & Marks Sheet

| S.No. | Roll No.   | Name of the Student    | Signature    |
|-------|------------|------------------------|--------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   | Harshitha    |
| 2     | 19DH1R0028 | HADNOOR MAHESH         | Mahesh       |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     | Shivani      |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       | Srilatha     |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     | Vaishnavi    |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  | Rispachelsi  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         | Chandana     |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    | Sai Kiran    |
| 9     | 19DH1R0061 | NOOR SULTANA           | Noor         |
| 10    | 19DH1R0063 | PATHLOTH ARUNKUMAR     | Arunkumar    |
| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI | Rajyalakshmi |
| 12    | 19DH1R0081 | R PRADEEP              | Pradeep      |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    | Aishwarya    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       | Saina        |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         | Sowmya       |
| 16    | 20DH1R0094 | THARAKA BHARATH        | Bharath      |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      | Indumathi    |

  
Signature of the GPAT coordinator

















**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**GPAT COACHING PROGRAMME 2023**

Name of the faculty: Mr. Venkata Rao Mobile No. 8790961575

Designation: Assoc. professor Specialization: Pharmaceutics

| S.No. | Date    | Time |      | No. of Hours taken | Topic covered   | Signature of the faculty  | Authorized signature  |
|-------|---------|------|------|--------------------|---|---|---|
|       |         | From | To   |                    |   |   |   |
| 1.    | 9/1/23  | 9:30 | 6:30 | 7 hr               | Complexation  |    |    |
| 2.    | 10/1/23 | 9:30 | 6:30 | 7 hr               | Pharmaceutical calculations                               |    |    |
| 3.    | 11/1/23 | 9:30 | 6:30 | 7 hr               | Ph. calculations  |   |   |
| 4.    | 12/1/23 | 9:30 | 6:30 | 7 hr               | Tablets & capsules  |  |  |
| 5.    | 25/1/23 | 9:30 | 6:30 | 7 hr               | HLB, Semisolid dosage form                                |  |  |
| 6.    | 26/1/23 | 9:30 | 6:30 | 7 hr               | Dispersions   |  |  |
| 7.    | 28/1/23 | 9:30 | 6:30 | 7 hr               | Colloidal Dispersions<br>transdermal patches<br>cosmetics |  |  |
|       |         |      |      |                    |   |   |   |

  
GPAT Co-ordinator

VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH  
Narsapur, Medak Dist. – 502313

GPAT COACHING PROGRAMME 2023

Name of the faculty: *DR S. Nagaraj* Mobile No. *9885784793*

Designation: Specialization: *Pharmacology*

| S.No. | Date   | Time   |        | No. of Hours taken | Topic covered | Signature of the faculty | Authorized signature |
|-------|--------|--------|--------|--------------------|---------------|--------------------------|----------------------|
|       |        | From   | To     |                    |               |                          |                      |
| 1.    | 8/6/22 | 9:30am | 4:30pm | 6hr                | Receptor      | <i>S. Nagaraj</i>        |                      |
| 2.    | 9/6/22 | 9:30am | 4:30pm | 6hr                | ANS           |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |
|       |        |        |        |                    |               |                          |                      |

*J. Bindu*  
GPAT Co-ordinator

Narsapur, Medak Dist. – 502313

Name of the faculty: Dr. S. NAGARJUNA Mobile No. 9885784793

**Specialization:** PHARMACOLOGY

[illegible]

**J. Birdy**  
**GPAT COORDINATOR**

**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
Narsapur, Medak Dist. – 502313

**GPAT COACHING PROGRAM 2022**

**LIST OF STUDENTS**

| S.No. | Roll No.   | Name of the Student    |
|-------|------------|------------------------|
| 1     | 19DH1R0026 | GANTAMOINA HARSHITHA   |
| 2     | 19DH1R0028 | HADNOOR MAHESH         |
| 3     | 19DH1R0030 | JEEDIMETLA SHIVANI     |
| 4     | 19DH1R0041 | KUMMARI SRILATHA       |
| 5     | 19DH1R0050 | MIRAJDAR VAISHNAVI     |
| 6     | 19DH1R0051 | MOTHUKURI RISPACHELSI  |
| 7     | 19DH1R0054 | NAKKA CHANDANA         |
| 8     | 19DH1R0057 | NAREGUDAM SAI KIRAN    |
| 9     | 19DH1R0061 | NOOR SULTANA           |
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| 11    | 19DH1R0074 | PURIMITLA RAJYALAKSHMI |
| 12    | 19DH1R0081 | R PRADEEP              |
| 13    | 19DH1R0083 | RUDRARAJU AISHWARYA    |
| 14    | 19DH1R0094 | SUSHRI SAINA SAR       |
| 15    | 20DH1R0009 | AVUSULA SOWMYA         |
| 16    | 20DH1R0094 | THARAKA BHARATH        |
| 17    | 20DH1R0096 | VANJARI INDUMATHI      |

  
Signature of the GPAT coordinator

answered

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**VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH**  
BYRIT, Vishnupur, Narsapur, Medak District – 502 313

Date: 17-12-2022

**CIRCULAR**

All the staff & students are here by to inform that we will have a guest lecture from 18-12-2022 to 21-12-2022 at 10:00am by Sannithi Nagarjuna Pharmacy officer, ESICMH & PGIMSR Rajajinagar for IV Years

Topic : GPAT training on pharmacology



  
**PRINCIPAL**

PRINCIPAL  
Vishnu Institute of Pharmaceutical  
Education & Research  
Narsapur, Medak Dist.-502 313, TS.

K.P.

#

P



VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

VISHNUPUR, NARSAPUR, MEDAK DIST-502313

Guest Lecture by Sannithi Nagarjuna from ESICMH & PGIMSR Rajajinagar

from 18/12/2022 to 21/12/22

