



# MANIPAL ACADEMY OF HIGHER EDUCATION

## Industrial Pharmacy I [PCE-BP502T]

Marks: 75

Duration: 180 mins.

### I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) Which of the following has good dissolution and absorption.
- |                     |                     |                |                         |
|---------------------|---------------------|----------------|-------------------------|
| 1) Organic solvates | 2) Crystalline form | 3) Pseudomorph | 4) Metastable polymorph |
|---------------------|---------------------|----------------|-------------------------|
- 2) Flow in which all the material is in discharge is referred to as:
- |              |                  |                 |              |
|--------------|------------------|-----------------|--------------|
| 1) Core flow | 2) Downward flow | 3) Conical flow | 4) Mass flow |
|--------------|------------------|-----------------|--------------|
- 3) During preformulation studies, Solubility is ideally studied at \_\_\_\_\_ °C.
- |         |         |             |        |
|---------|---------|-------------|--------|
| 1) 23.5 | 2) 37.5 | 3) 4 and 37 | 4) 4.5 |
|---------|---------|-------------|--------|
- 4) API belonging to Amide category readily undergoes \_\_\_\_\_.
- |              |               |              |              |
|--------------|---------------|--------------|--------------|
| 1) Oxidation | 2) Hydrolysis | 3) Reduction | 4) Reduction |
|--------------|---------------|--------------|--------------|
- 5) Amount of dissolved solids permitted in Water for Injection is \_\_\_\_\_.
- |           |          |           |           |
|-----------|----------|-----------|-----------|
| 1) 10 ppm | 2) 5 ppm | 3) 20 ppm | 4) 25 ppm |
|-----------|----------|-----------|-----------|
- 6) Preferred oil for injection given by IM route is \_\_\_\_\_.
- |               |                |                 |               |
|---------------|----------------|-----------------|---------------|
| 1) Almond oil | 2) Coconut oil | 3) Paraffin oil | 4) Sesame oil |
|---------------|----------------|-----------------|---------------|
- 7) Insulin is normally administered through \_\_\_\_\_.
- |             |             |             |             |
|-------------|-------------|-------------|-------------|
| 1) IM route | 2) IV route | 3) SC route | 4) IC route |
|-------------|-------------|-------------|-------------|
- 8) Glass belonging to Type II is \_\_\_\_\_.
- |                       |                    |                   |                      |
|-----------------------|--------------------|-------------------|----------------------|
| 1) Borosilicate glass | 2) Soda lime glass | 3) Sintered glass | 4) Dealkalised glass |
|-----------------------|--------------------|-------------------|----------------------|
- 9) \_\_\_\_\_ refers to stagnant water in water systems in Parenterals.
- |                     |                |                     |              |
|---------------------|----------------|---------------------|--------------|
| 1) Pipe lock system | 2) Dead valves | 3) Pneumatic valves | 4) Dead legs |
|---------------------|----------------|---------------------|--------------|
- 10) Cartons are evaluated for following tests except for \_\_\_\_\_.
- |        |                      |                  |                     |
|--------|----------------------|------------------|---------------------|
| 1) GSM | 2) Bursting strength | 3) Print Quality | 4) Scuff proof test |
|--------|----------------------|------------------|---------------------|

11) Patient information leaflets are not tested for \_\_\_\_\_.

1) Dimensions	2) Pin holes	3) GSM	4) Print quality
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12) Glycerin is used as \_\_\_\_\_ in tooth paste.

1) Stabilizing agent	2) Solubilizer	3) Humectant	4) Preservative
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13) Creams are basically \_\_\_\_\_ in nature.

1) Emollients	2) Emulsions	3) Ointments	4) Skin tonics
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14) Which of the following is not related to automatic capsule filling machine?

1) Auger	2) Dosator	3) Piston tamp	4) Dosing disc
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15) The acogel capsule filling machine has which one of the following 3 rollers?

1) Measuring roll, feeder roll, sealing roll	2) Measuring roll, die roll, sealing roll	3) Measuring roll, gel roll, sealing roll	4) Measuring roll, oil roll, sealing roll
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16) Bloom strength, A measure of cohesive strength of gelatin ideally for capsule should be.

1) 150-280	2) 100-200	3) 80-120	4) 120-150
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17) The role of ammonia in hair dye is

1) To impart gloss	2) To improve texture	3) To enable cuticle to swell	4) All of the above
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18) Which of the following tests for aerosols is related to particle size

1) Flash point	2) Flame projection	3) Cascade impactor	4) Foam stability
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19) The correct number for the propellant dichlorodifluoromethane is

1) 11	2) 12	3) 111	4) 112
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20) Which of the following is a compressed gas?

1) Propane	2) Nitrogen	3) Butane	4) Isobutane
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### II Long Answers

Answer all the questions.

- 1) What is pharmaceutical packaging? Classify the types of packaging with an example. Enlist any four important Quality Control tests to be performed for cartons and briefly explain (1+1+8) (10)
- 2) What are the advantages of Granulation? Discuss the different granulation techniques with their advantages and disadvantages (10)

### III Short Answers

Answer all the questions.

- 1) Briefly discuss about Hydrolysis and its importance during preformulation studies. Give two examples for drugs effected by Hydrolysis. (5)
- 2) Give a flow chart for a liquid sterile product manufactured by non-aseptic processing technique and discuss briefly. (5)

- 3) Write a note on plastic containers used in parenterals. Mention three problems associated with plastic containers (2+3) (5)
- 4) Explain the tests (i) uniformity of weight and (ii) Uniformity of content for evaluation of tablets (5)
- 5) Discuss the stages in the production of hard gelatin capsule shells. (5)
- 6) Describe the techniques used in preparation of pharmaceutical pellets (5)
- 7) What are the requirements of an ideal sunscreen agent? Give examples. What is the difference between chemical and physical sunscreens? (5)

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