



VIDYA SIRI COLLEGE OF PHARMACY

(A Unit of Kasipathi Educational Trust @ 157/2017 -18)

(Recognized by Government of Karnataka, Affiliated to Pharmacy Council of India, New Delhi & Board of Examining Authority, Drugs Control Department, Government of Karnataka)

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FIRST SESSIONAL EXAM Question Paper (THEORY)

2021-22

Branch: D. Pharm

Year: I. D. Pharm

Subject & Subject Code: Pharmaceutics (ER20-11T)

Marks: 40

Date: 16/03/2022

Time: 90 min

Instruction to Candidates:

- 1) Attempt All three Sections
- 2) Draw neatly labeled diagrams wherever necessary.

I. Long Answers (Answer any 3 out of 4 questions) 3 X 5 marks=15 Marks.

1. Explain in detail about NFI.
2. Describe the Salient features of IP 2018.
3. Enumerate the history of pharmacy before 1940.
4. Enlist the ideal properties of a pharmaceutical packaging material.

II. Short Answers (Answer any 5 out of 6 questions) 5 X 3 Marks= 15 Marks

5. Write a note on Martindale's Extra Pharmacopoeia.
6. Enumerate the Salient Features of the Chopra committee that brought recognition to profession of Pharmacy.
7. Classify the different types of packaging based on their function.
8. What is treated soda lime glass? How is it different from Borosilicate glass.
9. Enumerate the advantages and disadvantages of glass as packaging material.
10. List the advantages of plastic as packaging material.

III. Objective Answers (Answer all 10 out of 10 questions) 10 X 1 Marks = 10 marks

11. Write the career options of pharmacist in Industry.
12. What is a Colouring Agent, Give two examples?
13. Write the difference between Sweetening agent and flavouring agent.
14. What are preservatives, give two examples?
15. What is an antioxidant, Give two examples.
16. Enumerate the ideal properties of a preservative.
17. What are fixed dose combinations, give one example.
18. What is an USP-NF.
19. List the different types of glass used in packaging
20. List two advantages of silicone and chloroprene materials to be used as rubber closures

SUBMIT YOUR ANSWERS ON OR BEFORE 4:00PM TODAY to
pharmaceuticser2020@vidyasiricop.edu.in

Pharmaceutics:-

1.1. The national Formulary of India (NFI) ~~is~~ represent a broad consensus of medical opinion in respect of drugs and their formulation and provide the physician with carefully selected therapeutic agents of proved effectiveness which form the basis of national drug therapy.

The first second and third editions of National Formulary of India (NFI) were published in 1960, 1966 and 1979 respectively by the ministry of Health, Govt. of India. In the past 3 decades there has been vast expansion in the range of new drugs and their formulations. To address the need of publication of an updated version of NFI, Ministry of Health and Family Welfare, Govt. of India.

1.2. Salient Features:-

- * Addendum 2019 contains 66 new monographs including chemical (11), herbs and herbal products (03) and radiopharmaceuticals preparations (02).
- * One general monograph on Lotion also included.
- * Special emphasis has been given to the dosage forms of API whose dosage forms were not in the IP 2018.
- ⊙ General chemical tests for identification of an article have been almost eliminated and more specific emphasis
- * Special emphasis was given to include/upgrade dissolution test in existing monographs.
- * Most of the existing assays and related substance test have been upgraded to liquid chromatography method.

1.3. ~~History of Pharmacy before 1940:-~~

1.4. Pharmaceutical Package:-

- * It should have sufficient mechanical strength so as to withstand handling, filling, closing and transportation.
- * It should not react with the content stored in it.
- * It should be of such shape that can be elegant and also the content can be elegant and also the content can be easily drawn from it.

- * It should not leach alkali in the contents.
- * The container should not support mould growth.
- * The container must be the heat when sterilized.
- * The container must ~~be the heat~~ when should not be absorbed by the container.
- * The material used for making the container should be neutral or inert.
- * Any part of the container or closure should not react with each other.
- * Closure should be of non toxic nature and chemically stable with container content.

II. 5. Martindale's Extra Pharmacopoeia:-

The complete drug Reference provide you with practical, evidence based, global guidance, allowing you quickly understand the characteristic of drugs and their clinical uses. It contains.

- * Over 6,400 drug monography summarising the nomenclature, properties and action of each substance.
- * Over 100 herbs, diagnostic agents, radio-pharmaceuticals, pharmaceutical excipient, toxin persons.

II.6. Salient Feature:-

- * IP is in IV. Volumes, published IPC on behalf of Ministry of Health and Family Welfare in fulfilment of D.D. Act of 1940.
- * 366 revised monographs and 7 monographs have been omitted.
- * Pyrogen tests have been replace by the Bacterial endotoxin tests (BET) in parenterals preparation and other monograph.
- * For controlling the Microbial quality of all the medicinal product generate chapter on Maintenance, identification, preservation and Disposal of Microorganism have been series.

11.7. Type of Packaging:-

i) Primary Packaging \Rightarrow This packaging are those package which are in direct contact with the pharmaceutical formulation. The main aim of primary package is to protect the formulation from environmental, mechanical and/or other hazards.

ii) Secondary Packaging \Rightarrow The package external to primary package is known as secondary package. This package provide additional protection during ware house and also provide information about drug product for leaflets.

iii) Tertiary Packaging \Rightarrow It is outer package of secondary packaging & prevents damage to the product. It is used for bulk handling & shipping.

11.8. Soda lime Glass:-

Soda lime glass is product on large scale and used for bottles, drinking glasses and windows. Its light transmission properties, as well as low melting temperature, make it suitable for use as window glass. Its smooth and non-reactive surface makes it excellent as containers for food and drink.

~~The main key differ:~~

* Soda lime glass and borosilicate glass are two type of glass. The key difference between soda lime glass and borosilicate glass is that the soda lime glass does not contain boron-derived constituents whereas the borosilicate glass contain boron trioxide as the main glass-forming constituent.

11.9. Advantage of Glass packaging Materials:-

- * Metal containers are strong, relatively unbreakable opaque.
- * Resistance to chemical attack.
- * Impervious to water vapor, bacteria.
- * Readily coats a number of metal.

Disadvantage:

The most disadvantage expensive metal among tin, lead, aluminium, & iron. Currently some eye ointment still packaging in pure tin ointment tubes.

- ① Glass containers are expensive to manufacture.
- ② They are fragile, heavy and can leach out silica into the product during heat sterilization.

III. 11. There are many career opportunities for Pharmacist.

- i) Hospital Pharmacy
- ii) Community "
- iii) Industrial "
- iv) Veterinary "
- v) Social / Administrative "
- vi) Pharmacy Journalism
- vii) The Academia

III. 12. Colouring agents are mainly used to impart a distinctive appearance to the pharmaceutical dosage forms. We can also say that the colorants are the cosmetics for the pharmaceutical preparations because the aesthetic appearance of dosage forms can be enhanced by using suitable colorants.

III. 13. Sweetening agents are used to improve the taste of tablet but flavouring agent is dissolved in organic solvent and the solution is sprayed on the granules.

IV. 14. A preservative is a substance or chemical that is added to product such as food product, beverage, pharmaceutical drugs, paints, biological samples, cosmetics, wood, and any other product to prevent decomposition by microbial growth or by undesirable chemical changes.

Example: Salt, sugar, vinegar, sodium benzoate, salts of sorbic acid and propionic acids.

III. 15. Vitamin A and E, selenium and carotenoids such as beta-carotene, lycopene, lutein and zeaxanthin are examples of antioxidants.

III. 16. Ideal Properties of Preservatives:-

- * It should not be irritant.
- * It should not be toxic.
- * It should ~~not~~ be physically and chemically stable.
- * Preservative should be compatible with other ingredients used in formulation.
- * It should be act as good antimicrobial agent and should exert wide spectrum of activity.

III. 17. Combination products, also known as fixed dose dosage combination (FDCs), are combinations of two or more active drug in a single dosage form.

FDC is highly popular in the Indian pharmaceutical market and have been particularly flourishing in the last few years.

Example → Dufemethoxazole + trimethoprim

- * antitubercular FDC like rifampicin + isoniazid, isoniazid + ethambutol etc.

III. 18. USP-NF is a combination of two compendia, the United States Pharmacopeia (USP) and National Formulary (NF). It contain standards for medicines, dosage forms, drug substance, excipients, biologics, compounded preparation, medical devices, dietary supplements and other therapeutics.

III. 19. Type of ~~glo~~ Glass Packaging:-

- * Borosilicate glass
- * Treated soda-lime glass
- * Regular soda-lime
- * General purpose soda-lime glass.

III-20. Advantage of Chloroprene:-

- Due to the presence of Cl group close to the double bond so the bond is resistant to oxidation hence these rubbers age well.
- This rubber is more polar hence oil resistance.
- Heat stability is good (up to 150°C)

Advantage of Silicon:-

- Heat resistance (up to 250°C)
- Extremely low absorption and permeability of water.
- Poor tensile strength

