

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Winter Examination – 2024

Course: B. Pharmacy

Subject Name: Pharma Marketing Management

Max Marks: 75 M.

Date : 27/12/2024

Semester: VIII

Subject code: BP803ET

Duration: 3 Hr

Instructions:

1. All questions are compulsory
2. Draw diagrams wherever necessary
3. Figures to right indicates full marks

Q. No. 1 Objective Type Questions (All questions are compulsory)

(10X2) = 20

- i.) What are the advantages of market segmentation?
- ii.) Define product with example
- iii.) Write advantages of hospital pharmacy as a retail outlet.
- iv.) Write the concept of generic and branded pharma product.
- v.) Write the importance of industrial marketing.
- vi.) Define Marketing and Writes its importance.
- vii.) List out function of wholesaler.
- viii.) Define advertisement & writes its objectives.
- ix.) Differentiate between marketing and selling.
- x.) Define OTC Concept.

Q. No. 2 Long Answer Questions (Answer 2 out of 3)

(10X2) = 20

- i.) Describe importance & functioning of sampling & retailing.
- ii.) Write a note on product branding .Explain the concept of product management in Pharmaceutical industry.
- iii.) Discuss product life cycle. Write stages involved in product life cycle.

Q. No. 3 Short Answer Questions (Answer 7 out of 9)

(5X7) = 35

- i.) Write a note on various factors of marketing environment.
- ii.) Explain in detail about NPPA with its function
- iii.) Write a note PSR.
- iv.) Write a note on medical exhibition.
- v.) Explain new product decision with its importance.
- vi.) Write a note on vertical and horizontal marketing.
- vii.) What is the different online promotional technique for OTC product?
- viii.) Write a short note on DPCO.
- ix.) Explain the function of advertisement.

*****END OF THE PAPER*****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Winter Examination – 2024

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Q. No. 2 Long Answer Questions (Answer 2 out of 3)

(10X2) = 20

- i.) Describe importance & functioning of sampling & retailing.
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Q. No. 3 Short Answer Questions (Answer 7 out of 9)

(5X7) = 35

- i.) Write a note on various factors of marketing environment.
- ii.) Explain in detail about NPPA with its function
- iii.) Write a note PSR.
- iv.) Write a note on medical exhibition.
- v.) Explain new product decision with its importance.
- vi.) Write a note on vertical and horizontal marketing.
- vii.) What is the different online promotional technique for OTC product?
- viii.) Write a short note on DPCO.
- ix.) Explain the function of advertisement.

*****END OF THE PAPER*****

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE Regular/Supplementary Summer Examination – 2024		
Course: B. Pharmacy	Semester: VIII	
Subject Name: Social And Preventive Pharmacy	Subject Code: BP802T	
Max Marks: 75	Date: 27-06-2024	Duration: 3 Hr.
Instructions to the Students: 1. All questions are compulsory 2. Draw diagrams / figures wherever necessary 3. Figures to right indicate full marks		
Q.1.	Objective Type Questions (Answer All the Questions)	(10 X 2) = 20
i)	Define the term Nutrition and Health	
ii)	Explain Balanced diet.	
iii)	Write Functions of PHC.	
iv)	What is Health promotion?	
v)	Enlist the characteristics of good mental wellbeing.	
vi)	Write full form of SARS & RNTCP.	
vii)	Define the term Prevention and Preventive medicine.	
viii)	Name the causative agent of SARS.	
ix)	Write general principle for control and prevention of cholera.	
x)	Enlist socio-cultural factors related to health & disease.	
Q.2.	Long Answers (Answer 2 out of 3)	(10 X 2) = 20
i)	What are vitamins? Classify vitamins. Write importance, RDA and source of its.	
ii)	Define communicable and non-communicable disease with examples. Explain any one disease from each category.	
iii)	Explain objective functioning, strategy, outcome & role of pharmacist for Pulse polio programme.	
Q.3.	Short Answers (Answer 7 out of 9)	(5 X 7) = 35
i)	What are the social causes of diseases and social problems of the sick?	
ii)	Explain impact of poverty on health.	
iii)	Brief on National tobacco control programme	
iv)	How can be rural sanitation improved?	
v)	Describe Universal immunization programme	
vi)	Write note on drug addiction and drug substance abuse.	
vii)	Explain National mental health program.	
viii)	What is personal hygiene? How to maintain personal hygiene?	
ix)	What are the impact of urbanization on health and disease,	
*** END OF THE PAPER ***		

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE		
Regular/Supplementary Summer Examination – 2024		
Course: B. Pharmacy	Semester: VIII	
Subject Name: Pharma Marketing Management	Subject Code: BP803ET	
Max Marks: 75	Date: 19-06-2024	Duration: 3 Hr.
Instructions to the Students:		
1. All questions are compulsory		
2. Draw diagrams / figures wherever necessary		
3. Figures to right indicate full marks		
Q.1.	Objective Type Questions (Answer All the Questions)	(10 X 2) = 20
i)	Define Marketing and Write its importance.	
ii)	What are the advantages of market segmentation?	
iii)	Define product with example	
iv)	List out function of wholesaler.	
v)	Define advertisement & write its objectives.	
vi)	Differentiate between marketing and selling.	
vii)	Define OTC Concept.	
viii)	Write an advantages of hospital pharmacy as a retail outlet.	
ix)	Write the concept of generic and branded pharma product.	
x)	Write the importance of industrial marketing.	
Q.2.	Long Answers (Answer 2 out of 3)	(10 X 2) = 20
i)	Write a note on product branding. Explain the concept of product management in Pharmaceutical industry.	
ii)	What is pharmaceutical marketing Channels? explain various channels	
iii)	Write a note on motivation and prescribing habit of the physician.	
Q.3.	Short Answers (Answer 7 out of 9)	(5 X 7) = 35
i)	What are the different online promotional technique for OTC product?	
ii)	Write a short note on DPCO.	
iii)	Explain the function of advertisement.	
iv)	Write a note on medical exhibition.	
v)	Write a note on various factors of marketing environment.	
vi)	Explain PLC	
vii)	Write a note PSR.	
viii)	Explain new product decision with its importance.	
ix)	Write a note on vertical and horizontal marketing.	
*** END OF THE PAPER ***		

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**Regular & Supplementary Summer Examination – 2024****Course: B. Pharmacy****Semester: VIII****Subject Name: Pharmaceutical Regulatory Science****Subject Code: BP804ET****Max Marks: 75****Date: 19-06-2024****Duration: 3 Hrs.****Instructions to the Students:**

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions) (10 X 2) = 20

- i) What are the stages of drug discovery?
- ii) Explain about clinical trial protocol.
- iii) Discuss the process of approval of new drug in India.
- iv) Give the steps involved in export of Pharmaceutical products.
- v) Explain about Innovator and generic drugs.
- vi) Give brief account on monitoring patient safety during clinical trials.
- vii) Explain ASEAN Common Technical Document (CTD) research.
- viii) Explain clinical trial protocol.
- ix) Discuss about federal register.
- x) Describe about purple book.

Q.2. Long Answers (Answer 2 out of 3) (10 X 2) = 20

- i) Define drug discovery. Explain the different stages of drug discovery and development process.
- ii) What is NDA and ANDA? Give approval process and timeline involved in Investigational New Drug.
- iii) Explain organization structure and application of regulatory authorities of US.

Q.3. Short Answers (Answer 7 out of 9) (5 X 7) = 35

- i) Explain NDA & ANDA.
- ii) Explain non-clinical activities in drug development.
- iii) Explain regulatory authority in Japan.
- iv) Write a note on drug master file.
- v) Give brief account on electronic common technical document.
- vi) Give structure & functions of Institutional Review Board.
- vii) Explain procedure of GCP obligations of investigators, sponsors, and monitors.
- viii) Elaborate on regulations & regulatory concept.
- ix) What is orange book? Give its application.

***** END OF THE PAPER *****

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
End Semester Examination – Winter-2022
Date: 09/01/2023

Course: B. Pharmacy
Subject Name: Novel Drug Delivery System
Max Marks: 75

Sem: VII
Subject Code: BP704T
Duration: 3Hrs

Instructions –

1. All questions are compulsory
2. Draw diagrams/figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions)

(10 x 2) = 20

- i) What are ideal characters of polymers?
- ii) Give types of ocular inserts.
- iii) Write factors affecting formulation of Controlled release drug delivery systems.
- iv) Enlist advantages of implantable drug delivery system.
- v) Write the methods of microencapsulation.
- vi) Name the Marketed products of Transdermal Patches.
- vii) Give the types of medicated IUD's.
- viii) Write the different approaches for gastric retention.
- ix) Give examples of chemical penetration enhancers.
- x) Give the disadvantages of copper intrauterine devices.

Q. 2. Long Answers (Answer 2 out of 3)

(2 x 10) = 20

- i) What is Gastro retentive Drug Delivery System? Give its advantages & disadvantages with approaches for GRDDS.
- ii) Define Transdermal drug delivery system (TDDS)? Give its advantages and disadvantages. Describe permeation enhancer with examples.
- iii) What is Nasal DDS? Give its advantages & disadvantages with formulation of Nasal Sprays.

Q. 3. Short Answers (Answer 7 out of 9)

(7 x 5) = 35

- i) Biopharmaceutic Characteristics of Drug to qualify for CDDS.
- ii) Explain the Theories of Mucoadhesion.
- iii) Write the challenges in delivering drug to the eye.
- iv) Explain about Microballoons as gastro adhesive drug delivery system.
- v) Explain concept, advantages and disadvantages of liposomes.
- vi) State various methods to prepare nanoparticles.
- vii) Describe the formulations of nasal sprays.
- viii) Describe intrauterine drug delivery system with applications
- ix) Write a note on Non-Effervescent Systems for FDDS.

---END OF THE PAPER---

Course : B. Pharmacy
Subject Name : Instrumental Methods of Analysis
Max Marks : 75

Date: 03/01/2023

Sem: VII

Subject Code: BP701T

Duration : 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Answer following questions.**(10 x 2) = 20**

- i) Write the electronic transitions for the following molecules.
a) 1-3 butadiene b) acetaldehyde
- ii) Differentiate between singlet and triplet state.
- iii) Differentiate between single component and multicomponent analysis.
- iv) The compound A had travelled distance 5 cm, compound B distance travelled 7 cm on TLC plate. The solvent front distance was 10 cm. Calculate the R_f value for compound A and B?
- v) What is quenching. Enlist its types.
- vi) Draw a diagram of single beam and double beam UV-Visible spectrophotometer.
- vii) Differentiate between normal phase and reversed phase chromatography.
- viii) Define with example: auxochrome, chromophore.
- ix) Why derivatization techniques required in gas chromatography? Enlist derivatization methods used in GC.
- x) Calculate the concentration of compound in an ethanolic solution of which the absorbance in a 1cm cell at its λ_{max} 241 nm, was found to be 0.890. The A (1%, 1cm) of compound D is 540 at 241nm.

Q. 2. Answer the following questions (any two)**(2 x 10) = 20**

- i) Explain principle, instrumentation and applications of High performance Liquid Chromatography (HPLC).
- ii) Explain principle, instrumentation and applications of Gas Chromatography.
- iii) Explain the principle, instrumentation and applications of IR spectroscopy.

Q. 3. Answer the following questions (any seven)**(7 x 5) = 35**

- i) Distinguish between fluorescence and phosphorescence. Explain factors affecting fluorescence.
- ii) Discuss principle, instrumentation and applications of Gel chromatography.
- iii) Define Chromatography. Classify chromatographic methods with examples.
- iv) Explain the principle of Affinity Chromatography.
- v) Differentiate paper chromatography against TLC with respect to principle and applications.
- vi) Differentiate principle and applications of gel electrophoresis against capillary electrophoresis.
- vii) Differentiate principle and application of nephelometry against turbidimetry.
- viii) Write principle, types and applications of Ion Exchange Chromatography..
- ix) Explain principle, instrumentation and applications of Atomic Absorption spectroscopy.

-----END OF THE PAPER-----

Course: B. Pharmacy

Semester: - VII

Subject Name: Pharmacy Practice

Subject Code: BP703T

Max. Marks: 75

Date: 07/01/2023

Duration: 3 Hrs.

Instructions –

1. All questions are compulsory
2. Answers to MCQs should be written in full sentences
3. Draw diagrams / figures wherever necessary
4. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions)

(10 x 2) = 20

- 1) Draw a neat, labeled diagram of drug store layout
- 2) What is medication non-adherence?
- 3) List any four drugs for TDM.
- 4) Importance of patient counseling.
- 5) Define prescribed medication order.
- 6) Define budget
- 7) Write formula to calculate EOQ?
- 8) What is an investigational drug?
- 9) Give the normal range of: RBC, ESR.
- 10) Define automatic stop order for dangerous drugs.

Q. 2. Long Answers) (Answer 2 out of 3)

(2 x 10) = 20

- 1) Define hospital pharmacy. What are the roles and responsibilities of hospital pharmacist in the various areas of a hospital?
- 2) Write the organizational structure and functions of P&T committee.
- 3) Define TDM. Write the factors to be considered during Therapeutic Drug Monitoring.

Q. 3. Short Answers (Answer 7 out of 9)

(7 x 5) = 35

- 1) Define Adverse Drug Reaction. Write the classification of ADR with examples.
- 2) Define patient counselling. Explain in detail steps involved in patient counselling.
- 3) Write a note on drug information services. Write the source of drug information.
- 4) Explain the term 'Inventory control'. Describe in detail about ABC technique of Inventory control with its advantages.
- 5) Discuss about drug distribution methods for Inpatients.
- 6) Define OTC drugs with examples. Give the advantages and disadvantages of OTC drugs.
- 7) Define hospital formulary. Explain in detail the contents of hospital formulary.
- 8) Discuss the haematology parameters and its interpretation
- 9) Define community pharmacy. Explain the role of community pharmacist.

----- END OF THE PAPER -----

Date: 05.01.2023

Course : B. Pharmacy
Subject Name : Industrial Pharmacy II
Max Marks : 75

Semester: VII
Subject Code : BP702T
Duration : 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions)

(10 x 2) = 20

- i) Describe IND. Give types of IND application.
- ii) Enlist the steps involved in clinical research process.
- iii) Enlist Technology Transfer Team members with their role.
- iv) Discuss reasons behind creation of GLP.
- v) Differentiate between ISO 9001 & ISO 14001 Series.
- vi) Compile objectives of pilot plant scale up in Pharmaceutical Industry.
- vii) Enlist the responsibilities of CDSCO.
- viii) Highlight benefits of QMS implementation at Pharma space.
- ix) Enlist the contents of IB.
- x) Define Technology Transfer (TT). Illustrate in brief the need of TT in pharmaceuticals?

Q. 2. Long Answers (Answer 2 out of 3)

(2 x 10) = 20

- i) Discuss general/GMP considerations and importance of pilot plant scale up. Elaborate pilot plant scale up for Tablet manufacturing with CQAs.
- ii) Explain the need and objectives of regulatory requirements for drug approvals. Discuss NDA & ANDA application process in detail.
- iii) Elaborate the concept of Total Quality Management in Pharma Industry with historical background and benefits of implementation at Pharma space.

Q. 3. Short Answers (Answer 7 out of 9)

(7 x 5) = 35

- i) Summarize organization and responsibilities of CDSCO.
- ii) Comment on QRM in Pharmaceuticals with its process.
- iii) Elaborate Six Sigma concept in detail.
- iv) Summarize clinical research protocol in short.
- v) Explain QbD in pharmaceuticals.
- vi) Illustrate the significance of personnel requirements, space requirements and raw materials in Pilot plant scale up techniques.
- vii) Illustrate scope, significance, content and procedure for issuance of CoPP.
- viii) Explain role & responsibilities of Regulatory Affair Expert.
- ix) Enlist and explain Tech Transfer agencies in India.

-----END OF THE PAPER-----

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2024

Date: 26-12-2024

Course: B. Pharmacy
Subject Name : Novel Drug Delivery System
Max Marks : 75

Sem: VII
Subject Code: BP704T
Duration : 3 Hr.

Instructions:

1. All the questions are compulsory
2. Draw diagrams/figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective type questions (Answer all the questions)

(2 x 10) = 20

- i) Classify approaches for design of controlled drug delivery system.
- ii) Give the advantages and limitations of microencapsulation.
- iii) Define mucoadhesion and enlist theories of mucoadhesion.
- iv) What are the properties of a drug that make it suitable for the preparation of a transdermal drug delivery system?
- v) Classify the various approaches for gastroretention.
- vi) Define implants and give its different types.
- vii) Give the advantages and limitations of IUDs.
- viii) Outline the classification of polymers.
- ix) Define permeation enhancers and give examples.
- x) Enlist Excipients used in Nasal spray formulations.

Q. 2. Long answer questions (Answer any 2 out of 3)

(10 x 2) = 20

- i) Define targeted drug delivery system and give its advantages and limitations. Write a detailed note on nanoparticles as targeted drug delivery system.
- ii) Define microencapsulation and give its advantages and limitations. Explain coacervation-phase separation technique.
- iii) What is gastroretentive drug delivery system, give its advantages and limitations and describe non-floating systems.

Q. 3. Short answer questions (Answer any 7 out of 9)

(5 x 7) = 35

- i) Explain different formulation approaches of transdermal drug delivery system.
- ii) Describe dry powder inhalers (DPI) in detail.
- iii) Explain various barriers for ocular drug delivery system.
- iv) Write a note on intrauterine devices.
- v) Explain physiological aspects in buccal drug delivery system.
- vi) Describe passive implants in detail.
- vii) Explain the different theories of Mucoadhesion.
- viii) Enlist Physicochemical and biological properties of drugs relevant to controlled release formulations and explain biological properties.
- ix) Describe monoclonal antibodies and their applications.

-----END OF THE PAPER-----

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Regular/Supplementary Winter Examination – 2024

Course: B. Pharmacy

Subject Name: Industrial Pharmacy II

Max Marks: 75

Date: 20/12/2024

Semester: VII

Subject Code: BP702T

Duration: 3 Hr.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions) (10 X 2) = 20

- i) Describe different levels of scale up changes as per SUPAC.
- ii) Define validation? Explain benefits of validation.
- iii) What are the elements of QbD?
- iv) Enlist methods of risk management.
- v) What is qualification?
- vi) Describe State licensing authority?
- vii) List out the significance of NABL accreditation.
- viii) What are the benefits of ISO 14000?
- ix) What are the goals of quality management system?
- x) What is performance qualification?

Q.2. Long Answers (Answer 2 out of 3) (10 X 2) = 20

- i) Explain the regulatory approval process for New Drug Application.
- ii) Explain the concept of Quality and Total Quality Management.
- iii) Describe documentation required in technology transfer

Q.3. Short Answers (Answer 7 out of 9) (5 X 7) = 35

- i) Explain the responsibilities of regulatory affairs professionals.
- ii) Write a note on Platform Technology.
- iii) Describe the Organization of CDSCO with flow diagram.
- iv) Discuss the objectives and scope of GLP in Pharmaceutical industry.
- v) Write note on Certificate of Pharmaceutical Product (COPP).
- vi) Write a note on Drug Technical Advisory Board (DTAB) and its functions.
- vii) Explain the concepts of Six Sigma for Quality Improvement.
- viii) Explain the applications of Biostatistics in Pharmaceutical Product Development.
- ix) Write a note on Clinical research protocol.

*** END OF THE PAPER ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
WINTER SEMESTER EXAMINATION 2024

16

Course: Bachelor of Pharmacy

Subject Name: Pharmacy Practice

Max Marks: 75

Date : 23/12/2024

Semester: VII

Subject Code: BP703T

Duration: 3 Hr.

Instructions to the Students:

- All questions are compulsory
- Draw diagrams / figures wherever necessary
- Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions)

(10 X 2) = 20

- What are the criteria of drugs used for therapeutic drug monitoring?
- Define Re-order quantity level and Danger level of inventory.
- What is the importance of budget preparation in hospital pharmacy?
- Define with examples i) Teratogenicity ii) Mutagenicity
- What are the risks associated with OTC drugs?
- What is the importance of drug medication history?
- Write in brief the parts of Prescription.
- Define allergy and classify drug allergic reactions.
- What is the clinical significance of abnormal constituents of urine?
- Define inventory. Enlist methods of analysis of drug expenditure.

Q.2. Long Answers (Answer 2 out of 3)

(10 X 2) = 20

- Explain the concept of clinical pharmacy and discuss the functions and responsibilities of clinical pharmacists in drug therapy monitoring.
- What is P&T Committee? Explain its organization, functions, and role in drug safety.
- Define a hospital pharmacy. Write in detail about the functions and responsibilities of a hospital pharmacist.

Q.3. Short Answers (Answer 7 out of 9)

(5 X 7) = 35

- What is the drug distribution system in hospitals? Explain the methods of it.
- Note on Therapeutic Drug Monitoring.
- Define purchase. Explain various types of drug purchases.
- Define patient counseling. Explain the detailed steps involved in patient counseling.
- Define Adverse Drug Reactions. Explain methods of detecting and reporting ADR.
- Explain the Drug information service. Describe the different sources of drug information.
- Define inventory control. Describe ABC analysis and EOQ techniques of inventory control.
- Describe in detail investigational use of drug.
- Define hospital formulary. Explain the detail content and guiding principles of hospital formulary.

*** END OF THE PAPER ***

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Winter Semester Examination – 2024

Course: Bachelor of Pharmacy

Semester: VII

Subject Name: Instrumental Method of Analysis

Subject Code: BP701T

Max Marks: 75

Date: 18/12/2024

Duration: 3 Hrs.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Que 1) Objective Type Questions (Answer All the Questions)

(2 X 10) = 20

- i) Define chromatography & classify chromatographic technique.
- ii) Explain Chromophore & Auxochrome.
- iii) Enlist the detector used in gas chromatography.
- iv) How paper chromatography differentiated from TLC?
- v) Define quenching & enlist different types of quenching.
- vi) Write the principle & application of UV-Visible spectroscopy.
- vii) Write short notes on electronic transition.
- viii) Write the application of electrophoresis.
- ix) Write notes on photomultiplier tube.
- x) Write difference between nephelometry & turbidometry.

Que 2) Long Answer Question (Answer 2 out of 3)

(10 X 2) = 20

- i) Write principle, theory, stationary phase used & application of HPLC techniques.
- xi) Write instrumentation & application of Ion Exchange Chromatography. Write notes on exchanger.
- ii) Write instrumentation & application of IR spectrometer. Explain the detector used in IR spectrometer.

Que 3) Short Answer Question (Answer 7 out of 9)

(5 X 7) = 35

- i) Explain in detail about Phototubes & photoemission cells.
- ii) Discuss about principle & instrument of column chromatography.
- iii) Write principle & steps involved in FLC technique.
- iv) Explain Beer's & Lambert's law with their deviation.
- v) Write notes on factor affecting vibration in IR.
- vi) Write about methodology & application of paper chromatography.
- vii) Write notes on detector used in flame photometry.
- viii) Write instrumentation & application of Ion Exchange Chromatography.
- ix) Write details about Quenching. Explain the factor affecting fluorescence.

***** END OF THE PAPER*****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2024

Course: B. Pharmacy

Semester: VII

Subject Name: Industrial Pharmacy II

Subject Code: BP702T

Max Marks: 75

Date: 14-06-2024

Duration: 3 Hr.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1.	Objective Type Questions (Answer All the Questions)	(10 X 2) = 20
i)	What is mean by scale up and scale down?	
ii)	Define technology transfer.	
iii)	Enlist the types of qualification.	
iv)	What is bioequivalence study?	
v)	Identify the meaning of CMO.	
vi)	What is mean by analytical method transfer?	
vii)	What is mean by Quality risk management (QRM)?	
viii)	What is GMP certification?	
ix)	Recognize the importance of ISO 14000.	
x)	What is six sigma concept?	
Q.2.	Long Answers (Answer 2 out of 3)	(10 X 2) = 20
i)	Elaborate in details SUPAC guidelines with various levels of changes in manufacturing.	
ii)	Describe validation master plan and discuss the types of validation.	
iii)	Describe in brief the approval process of new drug.	
Q.3.	Short Answers (Answer 7 out of 9)	(5 X 7) = 35
i)	Elaborate upon role of regulatory affairs Department.	
ii)	Summarize the content of Investigator's Brochure.	
iii)	Describe the phases of human clinical trial.	
iv)	What is the objective and functions of pilot plant?	
v)	Elaborate upon technology transfer protocol.	
vi)	Write short notes on CDSCO.	
vii)	Discuss information included in IND application.	
viii)	What is total quality management and discuss its elements.	
ix)	Write short notes on elements in GLP.	
*** END OF THE PAPER ***		

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Supplementary Summer Examination – 2024

Course: B. Pharmacy

Subject Name: Pharmacy Practice

Max Marks: 75

Date: 18/06/2024

Semester: VII

Subject Code: BP703T

Duration: 3 Hr.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions)

(10 X 2) = 20

- i) What is TDM?
- ii) Enlist different forms and form number required to set up retail drug store.
- iii) What is OPD and IPD?
- iv) Define clinical Pharmacist and Enlist four functions of clinical Pharmacist.
- v) What is Patient Counselling? Give importance of Patient Counselling.
- vi) What is an investigational Drugs?
- vii) What is medication non-adherence?
- viii) Enlist sources of drug information.
- ix) Draw a well-labelled diagram of a hospital pharmacy.
- x) What do you mean by prescribed medication order?

Q.2. Long Answers (Answer 2 out of 3)

(10 X 2) = 20

- i) Define Hospital and Discuss various types of classification of Hospital.
- ii) What is drug distribution system in Hospital? Explain the method of drug distribution to the inpatient area.
- iii) Write organizational structure and function of P & T committee.

Q.3. Short Answers (Answer 7 out of 9)

(5 X 7) = 35

- i) Write the roles and responsibility of Hospital Pharmacist.
- ii) Define Adverse Drug Reaction. Write the classification of ADR with example.
- iii) Define Hospital Formulary. Explain in detail the contents of Hospital Formulary.
- iv) Define Community Pharmacy. Explain the role of community Pharmacy.
- v) Define OTC drugs with examples. Give advantages & disadvantages of OTC drugs.
- vi) Give a brief note on the medication chart review.
- vii) Give a brief note on the drug & Poison information Centre.
- viii) What is Inventory control? Describe in detail about ABC technique?
- ix) Discuss the Hematology parameters & it's interpretation.

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Supplementary Summer Examination – 2024

Course: B. Pharmacy

Subject Name: NOVEL DRUG DELIVERY SYSTEM

Max Marks: 75

Date: 20-06-2024

Semester: VII

Subject Code: BP704T

Duration: 3 Hr.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1.	Objective Type Questions (Answer All the Questions)	(10 X 2) = 20
i)	Describe nanoparticles along with their general properties.	
ii)	Explain ideal properties of bioadhesive polymer	
iii)	What factors affect the designing of modified drug delivery system?	
iv)	What is targeted drug delivery? Give its applications.	
v)	Write note on conservation method of microencapsulation.	
vi)	Define and compare active & passive targeting.	
vii)	What are the disadvantages of conventional ocular drug delivery system	
viii)	What is mucoadhesive drug delivery system? Give its application.	
ix)	Classify Liposome according to structure?	
x)	What are ion exchange resins?	
Q.2.	Long Answers (Answer 2 out of 3)	(10 X 2) = 20
i)	Explain in detail different methods for formulation of TDDS along with evaluation.	
ii)	Explain in detail various methods of preparation of liposomes	
iii)	Explain in detail formulation methods for nanoparticles along with advantages of nanoparticulate delivery.	
Q.3.	Short Answers (Answer 7 out of 9)	(5 X 7) = 35
i)	Explain the different theories of mucoadhesion.	
ii)	Explain the evaluation parameters for transdermal patches.	
iii)	Write a short note on contact- lens.	
iv)	What are advantages & disadvantages of implantable drug delivery system	
v)	Explain metered dose inhaler.	
vi)	Describe vapour pressure activated implantable device.	
vii)	Write a short note on biodegradable polymers.	
viii)	Explain the different barriers in ocular drug delivery	
ix)	Describe DSC & TGA studies of evaluation of polymer.	

20115

21222

3 Hours / 80 Marks

Seat No.

		3	6	8	1	0	9
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15 minutes extra for each hour

- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.

Marks

1. Attempt any SIX from the following :

6 × 5 = 30

- (a) Define Health and discuss various indicators of Health.
- (b) What are problems of over population ? How the population can be controlled ?
- (c) Discuss in detail about importance of breast feeding, write ill effects of infant milk substitutes.
- (d) Write symptoms, prevention and treatment of tuberculosis. Write full form of DOTS.
- (e) Write causative organism, mode of transmission, prevention and control of AIDS.
- (f) Write about causative agent and prevention of Typhoid Fever and Chikungunya.
- (g) Discuss about various National Health programmes of India focusing on communicable diseases.

20115

[2 of 4]

10 × 3 = 30

2. Attempt any TEN from the following :

- (a) Describe National health policy.
- (b) Write about ill effects of air pollution and its prevention.
- (c) Write about hazards of water pollution and its prevention.
- (d) What is malnutrition ? Write ill effects of junk food.
- (e) Write functions and daily requirement of proteins.
- (f) Write clinical presentation and control of malaria.
- (g) Draw the diagram of a typical bacterial cell and name the components.
- (h) Describe Gram staining method for Bacteria.
- (i) Write prevention and treatment of leprosy.
- (j) Write about Ayushman Bharat (PM-JAY).
- (k) What is health insurance ? Give its types.

20 × 1 = 20

3. Solve the following multiple choice questions :

- (a) Write full form of SDG.
- (b) Write full form of NHP.
- (c) BCG stands for _____.
- (d) MTP stands for _____.
- (e) Write deficiency disorder caused by deficiency of vitamin C.
- (f) Name any one pandemic disease.
- (g) Write the name of one vaccine to prevent COVID-19.
- (h) Name the micro-organism causing cholera.
- (i) Write name of one National Health programme focusing on NCDs.
- (j) What is HMO ?
- (k) Carcinogens cause
 - (a) Cancer
 - (b) Diabetes
 - (c) Hypertension
 - (d) T.B.
- (l) Life styles are learnt from
 - (a) Parents
 - (b) Mass media
 - (c) Friends
 - (d) All of these

- (m) Increased levels of air pollution results in ____.
- (a) Soil erosion (b) Global warming
(c) Respiratory problem (d) All of these
- (n) Which is the most common method used to dump solid wasters ?
- (a) River (b) Ocean
(c) Land Fill (d) None of these
- (o) Write full form of 'GM' food.
- (p) Rabies is a
- (a) Viral disease (b) Bacterial disease
(c) Fungal disease (d) None of these
- (q) Polio virus mainly replicates in
- (a) Lungs (b) Liver
(c) GIT (d) None of these
- (r) PHC stands for
- (a) Primary Hospital Centres (b) Primary Healthcare Centres
(c) Public Healthy Centres (d) Prime Human Centres.
- (s) National mental health programme was launched in the year
- (a) 1985 (b) 1979
(c) 1982 (d) 1990
- (t) Which organization provides blood to patients ?
- (a) Medical store (b) Dispensary
(c) Hospital (d) Blood bank
-

FY

24

20114

21222

3 Hours / 80 Marks

15 minutes extra for each hour

Seat No.

		3	6	8	1	0	9
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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.

Marks

1. Answer any SIX of the following :

30

- (a) Define Skeleton. Name the bones of axial and appendicular Skeleton.
- (b) Describe the process of blood coagulation. Name the factors which accelerate & retard blood clotting.
- (c) Describe the structure and functions of skin with a neat labelled diagram.
- (d) Name the valves and chambers of human heart. Explain Cardiac cycle.
- (e) Draw a neat labelled sketch of L.S. of kidney and explain its structure.
- (f) Define reflex action. Describe the basic components of reflex arc with labelled diagram.
- (g) Name the organs of digestive system. Give the composition and functions of gastric juice.

10 or 11 marks

[1 of 4]

P.T.O.

2. Answer any TEN of the following :

- (a) Name four fundamental tissues of body. Differentiate between smooth and skeletal muscles.
- (b) Define the terms :
 - (i) Cardiac output
 - (ii) Stroke volume
 - (iii) Blood pressure
- (c) Draw a neat sketch of human cell and label :
 - (i) Nucleus
 - (ii) Golgi apparatus
 - (iii) Mitochondria
 - (iv) Cytoplasm
 - (v) Lysosomes
 - (vi) Endoplasmic reticulum
- (d) Write six functions of liver.
- (e) Define hormones. Name hormones of anterior pituitary gland.
- (f) Classify leukocytes with their functions.
- (g) Draw a neat labelled diagram of lymph node and state its two functions.
- (h) Explain the physiology of respiration.
- (i) Write the effect of stimulation of sympathetic system on :
 - (i) Heart
 - (ii) Eye
 - (iii) Small intestine
- (j) Explain the role of insulin and glucagon in the body.
- (k) Name different parts of male reproductive system with their functions.

3. Answer ALL questions :

- (a) Name three layers of heart.
- (b) The blood vessel which carry deoxygenated blood from heart to lungs is _____.
- (c) The right lung has _____ white left lung has _____ lobes.
- (d) Intrinsic factor is necessary for absorption of _____.
- (e) _____ is hormone secreted by testes.
- (f) Name the bones involved in elbow joint.
- (g) Neurotransmitter released at neuromuscular junction is _____.
- (h) Peripheral nervous system consists of _____ pairs of cranial nerves and _____ pairs of spinal nerves.
- (i) Name the cranial nerve responsible for equilibrium and hearing.
- (j) In which part of female reproductive system fertilization of ovum takes place ?
- (k) The study of physical structures of body is
- | | |
|-----------------|-----------------|
| (i) Anatomy | (ii) Physiology |
| (iii) Histology | (iv) Cytology |
- (l) The term "medial" means
- | | |
|-------------------------------|----------------------|
| (i) Away from surface of body | (ii) Near to head |
| (iii) Away from the head | (iv) Near to midline |
- (m) Which of the following is not a connective tissue ?
- | | |
|----------------------|---------------------|
| (i) Blood | (ii) Bone |
| (iii) Cardiac Muscle | (iv) Adipose Tissue |
- (n) The exchange of gases between air and lungs is called as :
- | | |
|----------------------------|---------------------------|
| (i) Internal respiration | (ii) Cellular respiration |
| (iii) External respiration | (iv) Bronchodilation |

- (o) Organ of corti helps in
- (i) Balancing
 - (ii) Hearing
 - (iii) Vision
 - (iv) All of the above
- (p) Taste cells on tongue that receive the stimulation of taste are :
- (i) Olfactory receptor
 - (ii) Gustatory receptors
 - (iii) Baroreceptor
 - (iv) Photoreceptor
- (q) _____ focuses light in retina.
- (i) Sclera
 - (ii) Iris
 - (iii) Cornea
 - (iv) Ciliary muscles
- (r) Following is an example of hinge joint
- (i) Shoulder joint
 - (ii) Hip joint
 - (iii) Knee joint
 - (iv) All joints in body
- (s) The functional unit of contractile system in striated muscle is known as :
- (i) M-line
 - (ii) Actin
 - (iii) Sarcomere
 - (iv) Myotibril
- (t) The reasons why right kidney is slightly lower than the left kidney is :
- (i) Right kidney is bigger than the left
 - (ii) Right kidney is smaller than the left
 - (iii) Considerable space occupied by liver on right side
 - (iv) Considerable space occupied by heart
-

28 8y
20113

21222

3 Hours / 80 Marks

Seat No.

		3	6	8	1	0	9
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15 minutes extra for each hour

Instructions – (1) All Questions are *Compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any SIX of the following.

30

- a) Write biological source and chemical constituents and uses of Belladonna and Ephedra.
- b) Explain pharmacological classification of crude drug with merits and demerits.
- c) Which parameters are consider for the evaluation of crude drug. Write any four methods or adulterations and substitutions.
- d) Define alkaloids and volatile oil. Explain the tests which performed for the identification of anthraquinone glycosides and tropane alkaloids.
- e) Define Oxytocics. Explain Ergot cycle with diagram.
- f) Explain the basic principles involved in Ayurvedic and homeopathic system of medicines.
- g) Define laxatives. Write chemical tests of
 - i) Turmeric.
 - ii) Asafoetida.

P.T.O.

2. Attempt any TEN of the following.

- a) Define pharmacognosy. Write the name of scientist who described the method of extraction. Also explain galenical pharmacy.
- b) Define Herbal Formulations. Write two examples of herbal solid dosage form. Give therapeutic applications of Garlic.
- c) Explain and write the significance of Ash value and extractive value.
- d) Define surgical dressings. State the Ideal requirements of surgical dressing.
- e) State the therapeutic applications of Ipecac, Artemisia and Ephedra.
- f) Write uses of Spirulina and Prebiotics.
- g) Differentiate between -
 - i) Antiseptics and Disinfectants with examples.
 - ii) Organised and unorganised crude drugs with examples.
- h) Define nutraceuticals and antioxidants. Also give their therapeutic applications.
- i) Define medicinal and aromatic plants. State the role of medicinal and aromatic plants in the national economy.
- j) Write the method of preparation of Arishta and Gutika.
- k) Write biological source and uses of lavender oil and sandal wood oil.

3. Attempt all of the following.

- a) Name the fibre which contain Keratin.
- b) Name the drug called as 'banda soap'.
- c) Write the name or drug having synonym bishop's weed.
- d) Name the drug which contain shogaol.

20113

[3]

Marks

- e) Which drug use in treatment of Rheumatism.
 - f) Name the drug which contain Reserpine.
 - g) Write the name of drug having synonym puncture vine.
 - h) Give one example of Probiotics.
 - i) In case of vasaka and clove which part of plant is used as drug.
 - j) Write two main constituents of guggul.
 - k) Write two cosmetic uses of olive oil.
 - l) Name the drug which contain alillin.
 - m) Name the drug belonging to combretaceae family.
 - n) Name the drug for which thalloquin test is performed.
 - o) Write one commercial preparation of aloevera gel.
 - p) Name the drug for which killer-killani test is performed.
 - q) Write two main constituents of rosemary oil.
 - r) Name the phytoconstituents for which Libbermann burchard test is performed.
 - s) Give one example of modern herbal for formulation.
 - t) Effleurage method is use for the isolation of which phytochemicals.
-

20112

21222

3 Hours / 80 Marks

15 minutes extra for each hour

Seat No.

		3	6	8	1	0	9
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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any SIX of the following:**

30

- a) What is parasympatholytic agent ? Classify it with suitable examples. Give the chemical structure, chemical name, and uses of Dicyclomine Hydrochloride.
- b) Define Gravimetric analysis. State its principle and describe various steps involved in it.
- c) Draw the chemical structure of antipsychotics having piperidine nucleus. Give its chemical name, uses, formulations and popular brand name.
- d) Draw the structure from the IUPAC name and write name of drug
 - (i) 2-(2,4-difluorophenyl)-1, 3-di (1H-1,2,4-triazol-1-yl) propan-2-ol
 - (ii) 2-amino-1, 9-dihydro-9-((2-hydroxyethoxy) methyl)-3H-purin-6-one

P.T.O.

- e) Define and classify Antimicrobial agents and explain their mechanism of action. Give pharmaceutical formulations, marketed preparations, storage conditions and uses of Boric Acid.
- f) Classify antibiotics according to chemical structure with examples. Draw and explain the structure of basic nucleus of Penicillins. Also give structure of Amoxicillin with its chemical name.
- g) Explain reaction and principle involved in limit test of arsenic and draw a neat, labelled sketch of Gutzeit apparatus.

2. Attempt any TEN of the following:

30

- a) Give any two brand names of –
 - (i) Diazepam
 - (ii) Amitriptyline
 - (iii) Carbamazepine
- b) Draw the chemical structure of chloramphenicol. Give its uses and brand name.
- c) State what is meant by 'Volumetric analysis'. Enlist its types and explain one precipitation type of titration.
- d) What are diuretics ? Draw the chemical structure of diuretics having furan nucleus. Give its chemical name and uses.
- e) Define 'Neoplasm' and classify antineoplastic agents with example.
- f) Enlist different "sources of impurities" and describe any two sources.
- g) What is co-trimoxazole ? Explain its mechanism of action and give two brand names of Co-trimoxazole.
- h) Define and classify anti-hypertensive agents. Draw the chemical structure of captopril.
- i) Give structure, properties, uses and brand names of Ibuprofen.

20112

[3]

Marks

- j) Classify Adrenergic drugs. Draw the structure and give chemical name of Naphazoline.
- k) Explain diabetes mellitus. Classify hypoglycemic agents with examples.

3. Attempt the following:

20

- a) Select the drug from following which acts as alkylating agents.
 - (A) 5-Fluorouracil
 - (B) Doxorubicin
 - (C) Cyclophosphamide
 - (D) Vincristine
- b) In what dosage form Azithromycin is given ?
- c) The basic heterocyclic ring present in phenytoin is _____.
 - (A) Pyrazole
 - (B) Imidazole
 - (C) Imidazolidine
 - (D) Pyrazolidine
- d) To prepare a solution of accurately known volume, use a
 - (A) Beaker
 - (B) Conical Flask
 - (C) Volumetric Flask
 - (D) Measuring Cylinder
- e) Cathartics are the drugs used to
 - (A) Relieve acidity
 - (B) Relieve constipation
 - (C) Reduce gastrointestinal irritations
 - (D) All of the above
- f) In limit test for sulphate, to prevent the super saturation of BaSO_4 , a small amount of _____ has been added in the reagent.
 - (A) Alcohol
 - (B) Dil. HCl
 - (C) Potassium sulphate
 - (D) Barium chloride
- g) To prevent dental caries, toothpaste should contain
 - (A) Strontium chloride
 - (B) Zinc chloride
 - (C) Sodium metaphosphate
 - (D) Sodium fluoride

P.T.O.

CH₃ - F
3 16

h) The antifungal drug, ketoconazole contains — heterocyclic ring.

- (A) Imidazole (B) Pyridine
(C) Acridine (D) Pyrimidines

i) Lasix is a popular brand of

- (A) Hydrochlorothiazide (B) Furosemide
(C) Amiloride (D) Acetazolamide

j) Name the antidepressant agent, which is a dibenzazepine derivatives

- (A) Citalopram (B) Fluoxetine
(C) Imipramine (D) Paroxetine

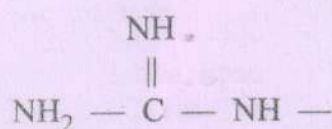
k) Match the followings.

- | | |
|--------------|-------------------------------|
| 1. Class I | a) Calcium channel blockers |
| 2. Class II | b) Beta - blockers |
| 3. Class III | c) Sodium channel blockers |
| 4. Class IV | d) Potassium channel blockers |

Options.

- a. 1-a, 2-b, 3-c, 4-d
b. 1-d, 2-b, 3-a, 4-c
c. 1-b, 2-c, 3-a, 4-d
d. 1-c, 2-b, 3-d, 4-a

l) The name of following group is



- (A) Anilino (B) Amidino
(C) Guanidino (D) Amino

m) In what dosage form Isosorbide Dinitrate is given ?

n) Which of the following NSAIDS is phenylacetic acid derivatives ?

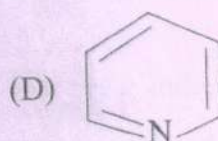
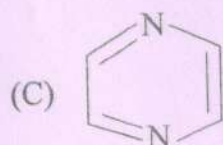
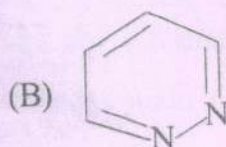
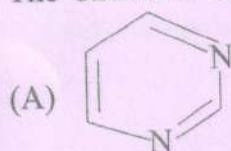
- (A) Diflusal (B) Aspirin
(C) Mefenamic acid (D) Diclofenac

20112

[5]

Marks

- o) Give structure and method of numbering for Acridine.
p) Write name and uses of drug containing imidazoline heterocycle.
q) The structure of pyridine ring is



- r) 2-acetoxybenzoic acid is IUPAC name of ?

(A) Paracetamol

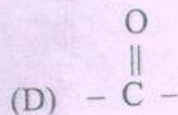
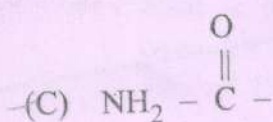
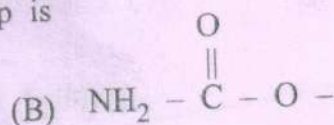
(B) Aspirin

(C) Mefenamic acid

(D) Ibuprofen

- s) The structure of carbamoyl group is

(A) $-\text{COOH}$



- t) Which of the following drug is direct acting cholinomimetic agent ?

(A) Parathion

(B) Physostigmine

(C) Carbachol

(D) Pyridostigmine

Seat No: - 368109

20111

36

21222

3 Hours / 80 Marks

Seat No.

3	6	8	1	0	9		
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15 minutes extra for each hour

Instructions – (1) All Questions are *Compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Answer any SIX of the following:

30

- Define capsules with its advantages and disadvantages. Differentiate between hard and soft gelatin capsules.
- Explain principle, construction, working of Hammer mill and applications with a neat labelled diagram.
- Define emulsion. Describe the manufacturing, packaging, labelling and storage of dry powder for reconstitution.
- Define tablet. Explain the different steps in film coating of tablets.
- Define eye drops. Explain various excipients used in eye drops.
- Define sera. Describe the preparation, storage use and dose of Typhoid vaccine.
- Define pharmacopoeia. Name the various editions of I.P. published with the year and their publications. Write any four salient features and 5th edition of I.P.

P.T.O.

- l) Who is known as the "Father of Pharmacy Education in India"?
- i) Acharya RC Ray
 - ii) Porf. Mahadev Lal Shroff
 - iii) Sushruta
 - iv) Charaka
- m) The word 'Pharmacy' is derived from the Greek word
- i) Pharmaces
 - ii) Pharma
 - iii) Pharmacisto
 - iv) Pharmakon
- n) Most simple and most frequently used method for size separation is _____.
- i) Sieve shaker
 - ii) Cyclone separator
 - iii) Air separator
 - iv) Elutriation
- o) Ball mill work on the principal of
- i) Impact
 - ii) Attrition
 - iii) Crushing
 - iv) Impact and attrition
- p) Simple syrup is a saturated solution of _____.
- i) Sucrose
 - ii) Fructose
 - iii) Dextrose
 - iv) None of these
- q) The first edition of I.P was published in _____.
- i) 1965
 - ii) 1975
 - iii) 1955
 - iv) 1985

- r) Who is the father of medicine?
- i) Ebers
 - ii) Hippocrates
 - iii) Egyptian
 - iv) Pontus
- s) The efficiency of a ball mill is maximum at
- i) Low speed
 - ii) High speed
 - iii) Very speed
 - iv) 2/3rd speed
- t) What is USP?
- i) The United States Pharmacology
 - ii) The United States Pharmacy
 - iii) The United States Pharmacopoeia
 - iv) The United States Pharmaceuticals
-

5a

- v) Determine Mode of following data by algebraic formula & represent it on graph.

Profit (Lakh)	5-10	10-15	15-20	20-25	25-30	30-35
No. of days	8	18	27	21	15	11

- vi) What is Plagiarism? Write about its different types.
- vii) Discuss the importance of SPSS, MINITAB and R-Software used for statistical analysis in research.
- viii) What is Ogive? Determine less than & more than Ogive of following data & represent graphically.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
Students	4	7	9	10	15	22

- ix) Write in brief about Graphical presentation of data as Histogram, Pie chart and Response surface plot.

*** END OF THE PAPER ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Regular/Supplementary Summer Examination – 2024

Course: B. Pharmacy

Semester: VIII

Subject Name: Biostatistics and Research Methodology

Subject Code: BP801T

Max Marks: 75

Date: 25-06-2024

Duration: 3 Hr.

Instructions to the Students:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1. Objective Type Questions (Answer All the Questions) (10 X 2) = 20

- i) Define Biostatistics & give its application in medical science.
- ii) Enlist different Parametric & Non parametric test used for hypothesis testing in research.
- iii) Differentiate between Central Composite Design (CCD) & Box-Behnken Design (BBD) in Design of Experiment.
- iv) Define Range & Standard Deviation.
- v) Write different properties of Normal Distribution Curve.
- vi) Explain Type I & Type II errors in Hypothesis testing.
- vii) Mention different values of correlation coefficient (r) to be interpreted as Very high, High, Moderate and Slight correlation.
- viii) What is Simple Random Sampling? Give examples.
- ix) Find the Median from data of tablet weights in mg as 110, 95, 102, 111, 99, 100.
- x) Give differences between Null Hypothesis and Alternative hypothesis

Q.2. Long Answers (Answer 2 out of 3) (10 X 2) = 20

- i) Discuss about structure & content of research report. Describe different techniques used for presentation of data in research report.
- ii) What is Discrete Probability Distribution? Explain in brief about Binomial Distribution & Poisson Distribution.
- iii) Explain Karl Pearson Coefficient Correlation. Calculate the coefficient of correlation between sale of two competitive pharmaceutical products.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Product A (Lakh)	65	40	35	75	63	80	35	20	85	65	55	33
Product B (Lakh)	30	55	68	28	76	25	80	85	20	35	45	65

Q.3. Short Answers (Answer 7 out of 9) (5 X 7) = 35

- i) What is Historical Research Design? Describe its different steps.
- ii) How Clinical research can be classified? Explain with examples
- iii) Why research design is needed? Comment on various stages of research design.
- iv) Describe in detail about Non-parametric Kruskal-Wallis's test & Wilcoxon Rank Sum test.

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Winter Examination – 2024

Course: B. Pharmacy

Semester: VIII

Subject Name: Biostatistics & Research Methodology

Subject Code: BP801T

Max Marks: 75

Date: 19/12/2024

Duration: 3 Hr.

Instructions to the Students:

- 1. All questions are compulsory**
- 2. Draw diagrams / figures wherever necessary**
- 3. Figures to right indicate full marks**

Q.1. Objective Type Questions (Answer All the Questions)

(10 X 2) = 20

- i) What is the difference between Statistics and Biostatistics?
- ii) Describe Dispersion and Range
- iii) Enlist various online statistical software used in clinical trials.
- iv) Differentiate between null and alternative hypothesis.
- v) Define a) Normal distribution b) Poisson's distribution.
- vi) Enumerate different graphs used for representing quantitative data.
- vii) What is plagiarism?
- viii) Define factorial design and write their two advantages.
- ix) What is the difference between null hypothesis and alternative hypothesis?
- x) Explain multiple regression and standard error of regression.

Q.2. Long Answers (Answer 2 out of 3)

(10 X 2) = 20

- i) Describe different phases of clinical trials.
- ii) What is Curve Fitting? Explain curve fitting by the method of least squares.
- iii) From the following data calculate mean, median and mode.

Class limits	0-30	30-60	60-90	90-120	120-150	150-180
Frequency	8	13	22	27	18	7

Q.3. Short Answers (Answer 7 out of 9)

(5 X 7) = 35

- i) Enlist various non-parametric test and explain in detail Wilcoxon Rank Sum Test.
- ii) Explain t-test (Sample, Pooled or Unpaired and Paired).
- iii) Write a short note on historical design.
- iv) Discuss the applications of EXCEL and SPSS programmes in statistical analysis.
- v) Write a short note on a) Cohorts studies b) Observational studies.
- vi) Define hypothesis. Explain different types of hypothesis.
- vii) Write a note on Least Significance Difference.
- viii) What is sampling, write its objectives and explain the importance of sampling in hypothesis testing.
- ix) Describe experiential design technique.

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Winter Examination – 2024-25

Course: B. Pharmacy

Semester: VIII

Subject Name: Pharma Marketing Management

Subject Code: BP803ET

Max Marks: 75

Date: 24/12/2024

Duration: 3 Hr.

Instructions to the Students:

- 1. All questions are compulsory**
- 2. Draw diagrams / figures wherever necessary**
- 3. Figures to right indicate full marks**

Q.1. Objective Type Questions (Answer All the Questions) (10 X 2) = 20

- i) Define OTC with example.
- ii) What is vertical marketing?
- iii) Define product with example.
- iv) State the objectives of Promotion.
- v) Define advertisement & write its objectives.
- vi) Differentiate between marketing and selling.
- vii) Define Marketing and Write its objectives.
- viii) Write the role of NPPA.
- ix) Write the difference between generic and branded Pharma Product.
- x) Write the importance of industrial marketing.

Q.2. Long Answers (Answer 2 out of 3) (10 X 2) = 20

- i) Explain in details the duties, Selection and training of PSR in Pharmaceutical market with example.
- ii) What is pharmaceutical marketing Channels? Explain various channels.
- iii) What do you mean by PLC? Explain in details the life cycle of Pharmaceutical Product.
Write a note on motivation and prescribing habit of the physician.

Q.3. Short Answers (Answer 7 out of 9) (5 X 7) = 35

- i) Explain new product decision with its importance.
- ii) Add a note on Conflicts in channel.
- iii) Explain the function of advertisement.
- iv) Write a note on medical exhibition.
- v) Write a note on various factors of Marketing Environment.
- vi) Explain the different promotional techniques for OTC Product.
- vii) Write a note market research.
- viii) Write an overview of DPCO.
- ix) Write a note on global Marketing of Pharmaceutical Product.

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2024

Course : B. Pharmacy Sem: VIII
Subject Name : Pharmaceutical Regulatory Science Subject Code : BP804ET
Max Marks : 75 Duration : 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) (10 x 2) = 20

- i) Enlist the stages of drug development process.
- ii) Name the regulatory authorities of India, US, EU and Australia.
- iii) Write Salient features of DMF
- iv) Enlist Modules of CTD.
- v) Write Constitution of IRB.
- vi) Difference between CTD and eCTD
- vii) Write Role of regulatory affairs in pharmaceutical industry.
- viii) Enlist different applications used for approval in EU.
- ix) What is clinical trial protocol?
- x) Difference between NDA and ANDA.

Q. 2. Long Answers (Answer 2 out of 3) (2 x 10) = 20

- i) Explain the stages of drug discovery process.
- ii) Explain the organization and functions of CDSCO.
- iii) Explain Managing and monitoring of clinical trials.

Q. 3. Short Answers (Answer 7 out of 9) (7 x 5) = 35

- i) What is DMF? Explain the contents of DMF.
- ii) Explain the importance of 21 CFR.
- iii) Discuss Phase I clinical trials
- iv) Explain the salient features of pharmacovigilance.
- v) Define and explain ethical principles of informed consent process.
- vi) Explain the salient features of orange book.
- vii) Write different modules of ACTD.
- viii) Explain regulatory approval process of IND.
- ix) Explain stage in development of generic formulations.

-----END OF THE PAPER-----