**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 02** **B.PHARM**
**(According to New Syllabus)** **15PH101**

**1st Semester Regular / Back Examination 2016-17**

**PHARMACEUTICS – I**
**BRANCH: B.PHARM**
**Time: 3 Hours**
**Max Marks: 100**
**QUESTION CODE:Y672**
**Answer Part-A which is compulsory and any four from the Part-B.**

**The figures in the right hand margin indicate marks.**
**Part-A (Answer all the questions)**

**Q.1 Answer the following:** **(2 x 10)**

**a)** The non-drug components in dosage form called as_____.

**b)** Gum acacia inan emulsion is used as _____.

**c)** Liquification is the example of _____ Incompatibility.

**d)** Out of the capsule sizes 00, 2, 3, 5; _____one is the larger and _____ is the smaller?

**e)** "Rx" indicates _____ part of the prescription and "sign." In prescription means _____.

**f)** Simple syrup IP contains _____% of _____.

**g)** The concentrated preparations containing the active principles of vegetable or animal drugs are called as _____.

**h)** Dry powder enclosed in a shell is referred as _____ and _____ are preparations which are generally used for cleansing the surfaces of the teeth

**i)** Proof spirit is _____ % alcohol by volume in the US system and _____% alcohol by volume in The British / Indian system.

**j)** Convert into metric system: 2 tablespoonful = _____ and 1 Gallon = _____

**Q.2 Answer the following:** **(2x10)**

**a)** What is displacement value? Give its significance.

**b)** Define aromatic waters. Mention its uses.

**c)** Differentiate bulk powders and divided powders.

**d)** What is Tincture of Iodine? Write its composition.

**e)** What is tablet triturate?

**f)** Calculate the real strength of alcohol (%v/v) of 30°·O.P.

**g)** What are throat paints? Give one example.

**h)** Differentiate between cream and paste.

**i)** What are Linctuses? Write any two uses.

**j)** Translate the following Latin terms into English: (i) Ad libitum (ii) auristillae

## Part-B (Answer any four questions)

**Q.3** **a)** Write the important developments in the history of Indian Pharmacopoeia. **(5)**

**b)** Define the term "Prescription". Explain the parts of a prescription in detail with an example of a typical prescription. Write briefly how to handle a prescription. **(7+3)**

**Q.4** **a)** What are the ideal characteristics of dosage forms? Classify solid dosage forms with examples. Add a note on dispensing of powders. **(3+3+4)**

**b)** Discuss briefly the dispensing procedure of ointments. **(5)**

**Q.5.** **a)** Define emulsion and classify different types of emulsions. Mention the various methods of preparation of an emulsion. Discuss in details how liquid paraffin emulsion prepared by dry-um method. **(4+2+4)**

**b)** Write on formulation and filling of hard gelatin capsules. **(5)**

**Q.6** **a)** Classify liquid dosage forms with examples. Discuss the principle and dispensing procedure adopted for suspensions. **(5+5)**

**b)** Write briefly how the calamine lotion dispensed with a proper label. **(5)**

**Q.7.** **a)** Define posology and discuss the various factors which affect the dose of a drug in detail. **(10)**

**b)** If 500 mg of drug is given to an adult, Calculate the dose for **(5)**
i) a child of 10 years old
ii) a child having body weight of 20 pound.

**Q.8** **a)** What are various incompatibilities in a prescription? Write notes on physical incompatibilities with suitable examples. **(7)**

**b)** What is extraction? Describe the Soxhlet apparatus and the process of extraction taking place in it. **(8)**

**Q.9** **Write notes on:- (Any three)** **(5x3)**

**a)** Effervescent Powders

**b)** Suppository Bases

**c)** Milks and Magmas

**d)** Flexible Collodions

**e)** Inhalations

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 2**

**B.PHARM**
**PH.1.5**

# 1st Semester Back Examination 2016-17
## PHARMACEUTICS-I (DISPENSING & COMMUNITY PHARMACY)
### (According to Old Syllabus)
**BRANCH: B.PHARM**
**Time: 3 Hours**
**Max Marks: 70**
**Q.CODE: Y673**

**Answer Question No.1 which is compulsory and any five from the rest.**
**The figures in the right hand margin indicate marks.**

**Q1** **Answer the following questions:** **(2 x 10)**

**a)** What is international pharmacopoeia and its utility?

**b)** Classify semisolid dosage forms with examples.

**c)** Differentiate simple and compound powders.

**d)** Mention the uses of aromatic waters.

**e)** What is meaning of D/P and U/P of proof spirit?

**f)** Differentiate ointment and paste.

**g)** What are mucilages? Give any two examples.

**h)** What are dry extracts?

**i)** Write how to prepare 300ml of 60% v/v of alcohol from 80% v/v and 20% v/v of alcohol.

**j)** Translate the following Latin terms:

(i) t.i.d

(ii) ante cibos

(iii) cochlear amplum

(iv) fiat pulvis

**Q2** **a)** Briefly describe in steps about the development and evolution of Indian Pharmacopoeia. **(6)**

**b)** Define the terms dose, dosage form and dosage regimen. Mention desirable properties of a dosage form. **(4)**

**Q3** What is a prescription? Explain the different parts of a prescription and their function. **(10)**

**Q4** **a)** What is Soxalation? Describe the process of extraction by using a Soxhlet apparatus. **(6)**

**b)** Write on reserved percolation and its advantages. **(4)**

**Q5** **a)** Define and classify emulsions and mention its advantages. Explain any four tests to identify emulsions. **(7)**

**b)** Write a brief note on causes of instability in emulsions. **(3)**

**Q6** **a)** Define posology and discuss the various factors which affect the dose of a drug in detail. **(6)**

**b)** If the adult dose of a drug is 50m calculate the dose of a boy of 12 years and 75 pounds by (i) Clarks formula and (ii) Gaubins formula **(4)**

**Q7** What do you mean by incompatibility? Classify incompatibilities. Describe in detail about Therapeutic incompatibilities with examples and remedies. **(10)**

**Q8** **Write notes on any two of the following:** **(5 X 2)**

**a)** Milk of magnesia

**b)** Effervescent powders

**c)** Lozenges and their preparation

**d)** Suppository bases

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 2 (Two)**

**B. PHARM**
**15PH102**

# 1st Semester Regular / Back Examination 2016-17
# INORGANIC PHARMA. CHEMISTRY
## (According to New Syllabus)
## Time: 3 Hours
## Max marks: 100
## Q. CODE: Y719

**Answer Part- 'A' which is compulsory and any Four from Part-'B'.**
**The figures in the right hand margin indicate marks.**

## Part- A

**Q1** Answer the following questions: **(2x10)**

**a)** Which of the following is used as a quenching vapour in GM counter?
i) Chlorine, ii) Bromine, iii) Ethyl formate, iv) All of these

**b)** What are the methods used for purifying inorganic substances?
i) Sublimation, ii) Recrystallisation, iii) Drying, iv) All of these

**c)** What is the pH of blood of a normal volunteer?
i) 4.5-8, ii) 7.4-7.5, iii) 5.4-7.5, iv) 1.5-3.5

**d)** Which of the following have vasodilation action?
i) Sodium nitrite, ii) Sodium thiosulphate, iii) Magnesium sulphate, iv) All of these

**e)** Which of the following is used as a dental desensitizing agent?
i) Strontium chloride, ii) Zinc chloride, iii) All of these, iv) None of these

**f)** Carbon dioxide is stored in which coloured cylinder?
i) Blue, ii) White, iii) Grey, iv) Black

**g)** Ammonium carbonate is used as :
i) Cathartic, ii) Sedative, iii) Respiratory stimulant, iv) None of these

**h)** Benzoic acid is used as
i) Dessicant, ii) Preservative, iii) Filter aid, iv) Suspending agent

**i)** Sclerosing agents are used to prevent
i) Edema, ii) Variceal bleeding, iii) Sepsis, iv) Warts

**j)** In the formation of chelate which of the following can be used as a ligand
i) EDTA, ii) Magnesium, iii) Iron, iv) All of these

**Q2** Answer the following questions: **(2x10)**

**a)** Explain universal antidote?

**b)** What is dry ice? Mention its use.

**c)** Explain the role of thioglycollic acid in the limit test of iron.

**d)** What is anti-rust tablet? Mention its composition & use.

**e)** Define expectorant. Give two examples.

**f)** Mention the storage and uses of laughing gas.

**g)** What is barium meal? Give its use.

**h)** What is the value of 'Z' generally the radio-active materials have?

**i)** Why ammonia and potassium cyanide are used in the limit test for heavy metals?

**j)** Combine antacid preparation is better than single antacid preparation. Justify it.

## Part- B (Answer any four questions)

**Q3** **a)** Classify topical agents with suitable examples. Mention the mechanism action of anti-microbial agents. Write down the monograph silver nitrite & hydrogen peroxide. **(10)**

**b)** Write short notes on: i) Emetics, ii) Limit test of chloride **(5)**

**Q4** **a)** Explain in details the limit test for arsenic along with a neat labeled diagram. **(10)**

**b)** Write a note on various types of water listed in I.P. **(5)**

**Q5** **a)** What is an antacid? Classify it. Write down the ideal characteristics of an antacid. Write the monograph of any two antacid. **(10)**

**b)** Classify cathartics basing on their mechanism of action with suitable examples. **(5)**

**Q6** **a)** Explain the functioning of G.M. counter. What precautions are to be taken during handling of radio pharmaceuticals? **(10)**

**b)** Give the applications of radio isotopes. **(5)**

**Q7** **a)** Write short notes on: i) Haematinics, ii) dentrifrices **(10)**

**b)** Write notes on the role of iodine in the body. **(5)**

**Q8** **a)** Classify antidotes according to the mechanism of action. Explain how cyanide poisoning affects the body and how it should be treated. **(10)**

**b)** What is replacement therapy? Write down ORS. **(5)**

**Q9** **a)** Write down preparation, properties and uses of the following: **(10)**
i) Zinc sulphate, ii) Boric acid, iii) zinc oxide, iv) Sodium fluoride

**b)** Write down the application of buffers in pharmacy. **(5)**

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 01** **B.PHARM**

**PH.1.7**

# 1st Semester Back Examination 2016-17
## PHARMACEUTICAL CHEMISTRY- I
### (According to Old Syllabus)
### BRANCH: PHARMACY
### Time: 3 Hours
### Max Marks: 70
### Q.CODE: Y720

**Answer Question No.1 which is compulsory and any five from the rest.**
**The figures in the right hand margin indicate marks.**

**Q1** **Answer the following questions:** **(2 x 10)**

**a)** Define pH and Buffer capacity.
**b)** Define Anti-Oxidants. Give two examples.
**c)** Write the principle of limit test of sulphate.
**d)** What is blue vitriol? Give its use.
**e)** Define Anti-caries agents. Give two examples.
**f)** What is the role of thioglycolic acid in limit test of Iron?
**g)** Write the composition of Universal antidote.
**h)** Define Emetics and give one example.
**i)** What is the role of lead acetate cotton in limit test of arsenic?
**j)** Explain the advantage of combination antacid therapy.

**Q2** **a)** Define Laxatives andCathartics?Classify them according totheir mechanism of action. **(5)**
**b)** Write the monograph of Magnesium sulphate. **(5)**

**Q3** **a)** What are antacids? Classify with suitable examples. What are the ideal characteristics of antacids? **(5)**
**b)** Write the monograph of Aluminum hydroxide gel. **(5)**

**Q4** Explain in detail the limit test of Arsenic along with a neat and labelled diagram. **(10)**

**Q5** **a)** Write a note on Dentifrices. **(5)**
**b)** What are Haematinics? Write the monograph of Ferrous sulphate. **(5)**
**Q6** **a)** Define Antiseptics and disinfectants. Classify them according to their mechanism of action. **(5)**
**b)** Define Astringents.Write the monograph of Alum. **(5)**
**Q7** **a)** Discuss about G-M counter. **(5)**
**b)** What precautions are to be taken during handling ofradiopharmaceuticals? **(5)**

**Q8** **Write short notes on any two:** **(5 x 2)**

**a)** Different concepts of acids and bases.
**b)** Electrolyte combination therapy and ORS.
**c)** Limit Test of Chloride.
**d)** Sources of impurity to pharmaceutical products.

| Registration no: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

**Total Number of Pages: 3**

**B.PHARM**
**15PH103**

**1st Semester Regular / Back Examination 2016-17**
**HUMAN ANATOMY AND PHYSIOLOGY- I**
**(According to New Syllabus)**
**QUESTION CODE: Y616**
**Time: 3 Hours**
**Max Marks: 100**

**Answer Part-A which is compulsory and any four from the Part-B.**

**The figures in the right hand margin indicate marks.**

**Part-A**

**Q.1** **Write the correct answer:** **(2 x 10)**

**a)** ---------- and ---------- are the contractile proteins present in muscle fibres.

**b)** Shoulder joint is formed by ---------- and ---------- bones.

**c)** ---------- is known as suicidal sac of cell.

**d)** Rhythmicity is a property of ---------- muscle.

**e)** Cardiac output = ---------- x ----------

**f)** Bone is a ---------- tissue.

**g)** Skin contains ---------- type of epithelial tissue.

**h)** ---------- is the longest and strongest bone of our body.

**i)** Normal value of haemoglobin in male is ---------- and female is ----------.

**j)** There are ---------- numbers of vertebrae present in vertebral column.

**Q.2** **Answer the following:** **(2x10)**

**a)** What is the difference between osteoporosis and osteomalacia?

**b)** What is erythropoiesis?

**c)** What is megaloblastic anaemia?

**d)** Write different types of WBC and their functions.

**e)** What is Proximal and Distal?

**f)** Define Autolysis.

**g)** Define haemostasis.

**h)** What are the antigens and antibodies present in $A^+$ blood group?

**i)** What is Abduction and Adduction?

**j)** Write different bone cells and their functions

**Part-B (Answer any Four questions)**

**Q.3** **a)** With neat and labeled diagram discuss the structure of human cell. **(5)**

**b)** Describe the structure and functions of Plasma membrane, Mitochondria Ribosome and Nucleus. **(10)**

**Q.4** **a)** Define and classify different types of tissue. **(5)**

**b)** Describe the following: **(5x2)**

I) Epithelial tissue
II) Connective tissue

**Q.5.** **a)** Classify the bones and describe the microscopic structure of bone. **(5)**

**b)** Define and classify joints? Write details about synovial joint. Write a note on Arthritis. **(10)**

**Q.6** **a)** Classify different types of muscle tissues and write their physiological functions. **(5)**

**b)** Write notes on: **(5x2)**

I) Neuromuscular junction.
II) Myasthenia gravis

**Q.7.** **a)** With neat and labeled diagram describe the anatomy and physiology of human heart. **(5)**

**b)** Write notes on **(5x2)**

I) Angina
II) Hypertension

**Q.8** **a)** Describe the composition and functions of blood. **(5)**

**b)** Write short notes on **(5×2)**

I) Mechanism of coagulation
II) Blood grouping

**Q.9** **a)** Define lymph and discuss the functions of lymphatic system. **(5)**

**b)** Write the physiology and functions of: **(5×2)**

a) Lymph nodes
b) spleen

**Registration No:** | | | | | | | | | | |

**Total Number of Pages: 02** **B.PHARM**
**New Syllabus** **15PH104**

# 1st Semester Regular Examination 2016-17
## COMMUNICATIVE ENGLISH
### BRANCH: PHARMACY
### Time: 3 Hours
### Max Marks: 100
### Q.CODE: Y510

**Answer Part-A which is compulsory and any four from Part-B.**
**The figures in the right hand margin indicate marks.**

**Part – A (Answer all the questions)**

**Q1** **Answer the following questions: (fill in the blank)** **(2 x 10)**

**a)** A word that contains one syllable is known as a _____ word.

**b)** An incomplete utterance always carries a _____ intonation.

**c)** Communication without the use of words is known as_____.

**d)** The medium that carries information from the sender to the receiver refers to_____.

**e)** When the receiver is unable to cope with the different messages at a time, the situation is known as _____.

**f)** The IPA symbol /j/ is found in the sound represented by the letter_____.

**g)** A verb which does not show/indicate tense in a sentence is called _____.

**h)** A sound formed by the combination of two vowels is known as _____.

**i)** The process in which the receiver re-converts the words mentally into the meanings is known as _____.

**j)** The prominence which is given, through greater breath force, to any particular syllable in a word is called_____.

**Q2** **Answer the following questions: *As directed.*** **(2 x 10)**

**a)** Write the other two alternatives of “Receiver”.

**b)** Pass away, give off (Make sentences using the phrasal verbs)

**c)** The quality that does not allow to carry more information than is required, in order to compensate for information loss during communication is known as redundancy. (Correct/Incorrect)

**d)** What is given information?

**e)** What do you mean by postures?

**f)** 'I like chocolate, but I prefer cake.' (State the verb type)

**g)** 'Negligence causes many serious accidents.' (Change the voice.)

**h)** /sʌmθiŋ/, /blʌd/, /bəʊn/, /pleis/ (Convert the IPA symbols into words.)

**i)** The fat cat sat on the mat. (Mark the stress)

**j)** What is Stress shift?

## Part – B (Answer any four questions)

**Q3** **a)** As Intonation coveys the attitude of the speaker, what are the situations in which the use of a Falling-risingintonation is appropriate? Narrate with examples. **(10)**

**b)** Discuss the difference between State and Event verbs with examples. **(5)**

**Q4** **a)** English is a stress-timed language not syllable-timed. Justify. **(10)**

**b)** Pragmatic rules are involved in discourse. Explain with examples. **(5)**

**Q5** **a)** Describe the process of communication. Discuss the different elements that influence this process. **(10)**

**b)** Indian learners have problems with such English sounds for pronunciation. Discuss. **(5)**

**Q6** **a)** Distinguish between Finite and Non-finite verb with examples. **(10)**

**b)** Spoken communication is context-dependent. Justify. **(5)**

**Q7** **a)** What is Agreement in English grammar? Describe its different usages with examples. **(10)**

**b)** What do you understand by Registers? Write at least two examples related to your profession. **(5)**

**Q8** **a)** Proper knowledge of body language helps an individual for communicating better? Explain. **(10)**

**b)** Distinguish between RP and GA. Discuss their impacts on Indian learners. **(5)**

**Q9** **a)** Mark the Stress and Intonation in the sentences given below. **(10)**

i) Water oozed through his nose.

ii) Just look at his awful luck!

iii) Your boss will have to climb into that bus.

iv) You'll leave next week?

v) The five fat fools fell into the river.

**b)** What do you mean by 'Diphthong' and how many diphthongs are there in English? **(5)**

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 3**

**B.PHARM**
**15PH105**

**1st Semester Regular / Back Examination 2016-17**

# REMEDIAL BIOLOGY

**(According to New Syllabus)**

**BRANCH: PHARMACY**

**QUESTION CODE: Y744**

**Time: 3 Hours**

**Max Marks: 100**

**Answer Part-A which is compulsory and any four from the Part-B.**

**The figures in the right hand margin indicate marks.**

## Part-A

**Q.1** **Choose the correct answer:** **(2 x 10)**

**a)** Name the four elements present in xylem.

**b)** Food and feeding in Amoeba is
   a) Circumvalation
   b) Invagination
   c) Both a and b
   d) None of the above

**c)** Cambium produces:
   a) Secondary xylem and
   b) Secondary phloem
   c) Parenchymatous cells
   d) Sclerenchymatous cells
   e) Both a and b

**d)** The property of response to a particular condition in the environment in amoeba is known as
   a) Inflammation
   b) Irritability
   c) Solation
   d) None of the above

**e)** Respiration in Trypanosoma is

a) Aerobic
b) Anerobic
c) Both a and b
d) None of the above

**f)** ……. Is the disease caused by Fasciola hepatica

**g)** Leaves without petiole are termed as ----------

**h)** Digenetic parasite of Plasmodium is due to the present of ……. and …… host

**i)** Vascular bundle are comprised of ---------- and ----------

**j)** Chloroplasts helps in ……, …….. and …….

**Q.2** **Answer the following:** **(2x10)**

**a)** What is sol-gel theory of locomotion in amoeba?

**b)** What role does the contractile vacuole play in Amoeba?

**c)** What is Ecdysis?

**d)** Define annular rings of plant.

**e)** Define phyllode. Give its examples

**f)** Name the disease caused by Ascaris and E.gingivalis.

**g)** Define Phyllotaxy.

**h)** What are the functions of Mitochondria?

**i)** What do you mean by Rafting?

**j)** What is Apolysis?

**Part-B(Answer any Four questions)**

**Q.3** **a)** Explain the reproduction in ameoba. **(10)**

**b)** Add a note on Entamoeba histolytica. **(5)**

**Q.4** **a)** Explain the structure and life cycle of Housefly. **(10)**

**b)** Distinguish between dicot stem and monocot stem. **(5)**

**Q.5.** **a)** Explain briefly about the life cycle of Trypanosoma gambiense. **(12)**

**b)** Add a note on diseases caused by the different species of this parasite. **(3)**

**Q.6** **a)** What is mitosis? Give a brief note on the different stages involved in it with a neat and labeled diagram. **(10)**

| | | | |
|---|---|---|---|
| | **b)** | Add a note on the lifecycle of mites. | **(5)** |
| **Q.7.** | **a)** | Define tissue. Classify it. Describe briefly about the different types of permanent tissues found in the plant body. | **(2+8)** |
| | **b)** | Write about the classification of root modifications with examples. | **(5)** |
| **Q.8** | **a)** | What is venation? Give a brief description about the different types of venation. | **(2+8)** |
| | **b)** | Add a note on the biological significance of Nucleic acid and vitamins. | **(5)** |
| **Q.9** | | **Write notes on:-(Any three)** | **(5×3)** |
| | **a)** | Solanacea family | |
| | **b)** | Lifecycle of silk worm | |
| | **c)** | Structure and functions of chloroplast | |
| | **d)** | Schizogony cycle in malaria parasites | |
| | **e)** | Stem modifications. | |

**Registration No:** | | | | | | | | | | |

**Total Number of Pages: 2**

**B. Pharm**
**PH. 1.11**

# 1st Semester Back Examination 2016-17
# REMEDIAL BIOLOGY
## (According to Old Syllabus)
## BRANCH: PHARMACY

**Full Marks-70**

**Time: 3 Hours**

**QUESTION CODE: Y745**

***Answer Question No. 1 which is compulsory and any five from the rest.***

**The figures in the right-hand margin indicate marks.**

**1) Answer the following questions:** **(2×10)**

**a)** What are the functions of Xylem and Phloem?

**b)** Define the term Phyllotaxy.

**c)** Name the causative organism for malaria and Filaria.

**d)** What do you mean by Ecdysis?

**e)** What are digenetic parasites? Give examples.

**f)** Write the types of feeding in amoeba.

**g)** What are the diseases caused by different species of trypanosomes?

**h)** How osmoregulation in amoeba does take place?

**i)** What are the functions of mitochondria?

**j)** What is Pseudopodia?

**2.** Explain the structure and lifecycle of Trypanosoma with a neat labeled diagram? **(5+5)**

**3.** Write briefly about the lifecycle of mosquito? **(10)**

**4.** What is venation? Give a brief description about the different types of venation**.** **(3+7)**

**5.** Write short notes: **(5×2)**

**a**. Locomotion of amoeba

**b**. Mitotic cell division

**6.** Define tissue. Classify it. Describe the different types of permanent tissues found in the plant body? **(3+7)**

**7.** Describe the structure and lifecycle of silkworm. **(10)**

**8.** Explain the structure and life cycle of Housefly. **(10)**

**Registration No:** | | | | | | | | | | |

**Total Number of Pages: 03** **B.PHARM**
**15PH106**

# 1st Semester Regular / Back Examination 2016-17
## REMEDIAL MATHEMATICS
### BRANCH: PHARMACY
### Time: 3 Hours
## Max Marks: 100
### Q.CODE: Y560

**Answer Part-A which is compulsory and any four from Part-B.**
**The figures in the right hand margin indicate marks.**

**Part – A (Answer all the questions)**

**Q1** **Answer the following questions:** ***multiple type or dash fill up type*** **(2 x 10)**

**a)** The value of $\begin{vmatrix} 17 & 58 & 97 \\ 19 & 60 & 99 \\ 18 & 59 & 98 \end{vmatrix}$ = _____ (1,0,-1,2)

**b)** State the order of $[a \quad b \quad c]$ =_____(1x3,3x1,2x1,1x2)

**c)** i) The median of the series 1, 3, 7, 10, 2, 4 is _____ .

ii) The mode of the series 1, 2, 1, 3, 1, 4, 1 is _____.

**d)** If cosα=$\frac{3}{5}$,cos$\beta = \frac{5}{13}$ ,0<α<$\frac{\pi}{2}$, 0<β<$\frac{\pi}{2}$,
the value of sin(α-β)=_____($\frac{16}{65}, \frac{-16}{65}, \frac{56}{65}, \frac{-56}{65}$)

**e)** The slope of the line joining the points (1,4) and 3,5) is _____.

($-\frac{-1}{2}, \frac{1}{2}, \frac{2}{3}, \frac{-2}{3}$)

**f)** The distance between the points (3,4) and (-2,1) is_____.

($\sqrt{33}, \sqrt{-34}, \sqrt{34}, \sqrt{32}$)

**g)** $\lim_{x\to 3} \frac{x^2-9}{x-3}$=_____

**h)** Find the differential coefficient of $\sqrt{x}$ with respect to$x^2$.

**i)** $\int_0^{\frac{\pi}{4}} sec^2 x dx$ = _____.(0,1,-1,2)

**j)** $Evaluate: \int log x dx$.

**Q2** **Answer the following questions: *Short answer type*** **(2 x 10)**

**a)** Divide 57 into two parts whose product is 782.
**b)** What is non-singular matrix and give one example?
**c)** Define mode and give one example.
**d)** Find the value of $cos75^0$
**e)** Find the value of a when the distance between the points (3,a) and (4,1) is $\sqrt{10}$.
**f)** Prove that the points (2, 5), (4, 6) and (8, 8) are collinear.
**g)** Evaluate: $\lim_{x\to 0} \frac{1-cosx}{xsinx}$
**h)** Differentiate $e^{tanx}$ with respect to sinx.
**i)** Evaluate: $\int \frac{1}{\sqrt{x+a}+\sqrt{x+b}} dx$
**j)** Find the value of $\int_{-\pi}^{\pi} cosxdx$

**Part – B (Answer any four questions)**

**Q3** **a)** Solve by Cramer's rule the equations **(8)**

3x+5y-7z=13
4x+y-12z=6
2x+9y-3z=20.

**b)** Solve: $2x^4+9x^3+8x^2+9x+2=0$ **(7)**

**Q4** **a)** Find the inverse of the matrix $A=\begin{bmatrix} 2 & 3 & 4 \\ 4 & 3 & 1 \\ 1 & 2 & 4 \end{bmatrix}$ **(8)**

**b)** Solve :$(x^2 + \frac{1}{x^2}) + 4(x+\frac{1}{x}) +6=0$, $x\neq 0$. **(7)**

**Q5** Compute the mean, median and mode of the following frequency distribution: **(5+5+5)**

| Class | 0-11 | 11-22 | 22-33 | 33-44 | 44-55 | 55-66 |
|---|---|---|---|---|---|---|
| Frequency | 9 | 17 | 28 | 26 | 15 | 8 |

**Q6** **a)** Show that tan3A.tan2A.tanA=tan3A-tan2A-tanA **(5)**

**b)** If tan(A+B) =x and tan(A-B) =y, find the values of tan2A and tan2B **(5)**

**c)** Prove that $\frac{sinA+sin3A+sin5A+sin7A}{cosA+cos3A+cos5A+cos7A} = tan4A$ **(5)**

**Q7** **a)** Find the equations of the medians of a triangle ABC, the co-ordinates of whose vertices are A(-1,6),B(-3,-9) and C(5,-8) **(8)**

**b)** Find the equations of the altitudes of the triangle whose vertices are A(6,-1),B(-3,8) and C(3,2) **(7)**

**Q8** **a)** Evaluate: $\lim_{x\to 0} \frac{3^x - 2^x}{tanx}$ **(5)**

**b)** Find $\frac{dy}{dx}$ $if$ $y = x^2 sinx + 2xcosx - 2sinx$ **(5)**

**c)** Find $\frac{dy}{dx}$ $if$ $y = x^x$ **(5)**

**Q9** **a)** Evaluate: $\int \frac{x}{\sqrt{x+a}} dx$ **(5)**

**b)** Solve: $\int e^x cosx dx$ **(5)**

**c)** Solve: $\int \frac{5x-3}{(x+1)(x-3)} dx$ **(5)**

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 02** **B.PHARM**
**PH.1.13**

# 1st Semester Back Examination 2016-17
## REMEDIAL MATHEMATICS
### BRANCH: PHARMACY
**Time: 3 Hours**
**Max Marks: 70**
**Q.CODE: Y559**
**Answer Question No.1 which is compulsory and any five from the rest.**
**The figures in the right hand margin indicate marks.**

**Q1** **Answer the following questions:** **(2 x 10)**

**a)** Form the quadratic equation whose roots are $1+\sqrt{3}$ and $1-\sqrt{3}$
**b)** What is singular matrix and give one example?
**c)** Define arithmetic mean and give one example.
**d)** Find the value of $sin75^0$
**e)** Find the area of triangle whose vertices are A(6,3),B(-3,5) and C(4,-2)
**f)** Determine the equation of a line passing through the point (-4,-7) and parallel to x-axis.
**g)** Find $\lim_{x\to 2} \frac{(x^4-16)}{(x-2)}$
**h)** Find $\frac{dy}{dx}$ $if\ y = (3-x^2)(x^3-x+1)$
**i)** Evaluate: $\int \frac{1}{\sqrt{x+a+\sqrt{x+b}}} dx$
**j)** Evaluate: $\int_1^2 \frac{1}{x} dx$

**Q2** **a)** Solve by Cramer's rule **(5)**
x-2y=4
-3x+5y+-7

**b)** Solve: $x - 2\sqrt{x}$-6=0 **(5)**

**Q3** **a)** Solve the system of equations by matrix method: **(5)**
2x+3y=4
X+3y+7

**b)** Solve: $9x^4 + 20 = 29x^2$ **(5)**

**Q4** Find the mean and median of the following frequency distribution **(10)**

| Class | 0-11 | 11-22 | 22-33 | 33-44 | 44-55 | 55-66 |
|---|---|---|---|---|---|---|
| Frequency | 9 | 17 | 28 | 26 | 15 | 8 |

**Q5** **a)** Prove that: (1+cotA-cosecA)(1+tanA+secA)=2 **(5)**

**b)** Show that : $\frac{tanA+tanB}{tanA-tanB} = \frac{\sin(A+B)}{\sin(A-B)}$ **(5)**

**Q6** **a)** Prove that the points A (1,-2), B (3, 6), C (5, 10) and D (3, 2) are the vertices of a parallelogram. **(5)**

**b)** Four points A(6,3),B(-3,5),C(4,-2) and D(x,3x) are given in such a way that $\frac{Area\ of\ triangle\ DBC}{Area\ of\ Triangle\ ABC} = \frac{1}{2}, find\ x.$ **(5)**

**Q7** **a)** Evaluate:$\lim_{x\to 0} \frac{2^x-1}{(1+x)^{\frac{1}{2}}-1}$ **(5)**

**b)** Find $\frac{dy}{dx}\ if\ y = (cosx)^{cosx}$ **(5)**

**Q8** **a)** Evaluate:$\int \frac{e^x-sinx}{e^x+cosx}dx$ **(5)**

**b)** Solve:$\int \frac{6x+7}{(x+2)^2}dx$ **(5)**

**Registration no:** | | | | | | | | | | |

**Total Number of Pages: 2** **B.PHARM**
**PH.1.9**

# 1st Semester Back Examination 2016-17
## PHARMACOGNOSY- I
### (According to Old Syllabus)
### BRANCH: B.PHARM
### Time: 3 Hours
### Max Marks: 70
### Q.CODE: Y762

**Answer Question No.1 which is compulsory and any five from the rest.**
**The figures in the right hand margin indicate marks.**

**Q1** **Answer the following questions:** **(2 x 10)**

**a)** Give the biological source and uses of Isabgol and Honey.
**b)** Define Stomatal number and Stomatal index.
**c)** What do you mean by Plant tissue culture?
**d)** What is Sophistication and Substitution?
**e)** What are secondary metabolites?
**f)** Write the important chemical constituents of Agar and Pectin.
**g)** Define Polyploidy.
**h)** Name four important natural pesticides.
**i)** What are various functions of Auxins?
**j)** Name two important anticancer drugs obtained from marine source.

Write notes on:

**Q2** **a)** Physical evaluation of crude drugs. **(5)**

**b)** Define drug evaluation and differentiate organized and unorganized crude drugs. **(5)**

**Q3** **Write notes on the followings:**

**a)** Different types of adulterants. **(5)**
**b)** Mutation and Hybridization in medicinal plants. **(5)**

**Q4** Define crude drugs. What are various types of crude drug classification? Discuss in detail about pharmacological method of crude drug classification. **(10)**

**Q5** **a)** Write a brief note on Glycosides. **(5)**

**b)** Write the biological source, chemical constituents and uses of Starch and Wool fat. **(5)**

**Q6** **Write notes on the followings:**

**a)** Various advantages of cultivation of medicinal plants. **(5)**

**b)** Scope of Pharmacognosy. **(5)**

**Q7** **Write notes on:**

**a)** Natural pesticides. **(5)**

**b)** What are various sources of crude drugs and write a note about Marine sources. **(5)**

**Q8** **Write the biological source, chemical constituents and uses of:** **(2.5 x 4)**

**a)** Guar gum

**b)** Tragacanth

**c)** Beeswax

**d)** Kokum butter