

Registration No :

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 02

B.Pharm  
15PH104

1<sup>st</sup> Semester Back Examination 2019-20

COMMUNICATIVE ENGLISH

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB853

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

**Part-I**

**Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**

- a) State what is the last step in a single cycle of communication?
- b) What is the regional variety of a language called in English?
- c) Define the term "filtering" as found in communication.
- d) Write the IPA symbol for the sound heard at the beginning of the word "Chat"
- e) Define a transitive verb with an example.
- f) What do you mean by decoding?
- g) Which form of the verb is used to refer to Past happening-related to-Present time?
- h) Define what is nucleus in tone of voice.
- i) In a sentence "He would wait for me for hours", what meaning does "would" express?
- j) Write the phonetic transcription of the weak form of the word "to".

**Part-II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) What is face-to-face communication? Justify why it is important.
- b) How is a vowel sound different from a consonant sound? Make a list of all short vowels using IPA symbols with examples in words
- c) What is Phonemic transcription? Transcribe the following words phonetically--- Thank,people,world,about,judge,computer
- d) There is no one-to-one correspondence between time and tense in English. Explain with examples.
- e) Some verbs are normally not used in progressive forms. What are these verbs called? Make a list of such verbs and use some of them in sentences.
- f) What is a conditional sentence? Explain different types of conditional sentences with examples.
- g) What is stress? Analyze stress variation with examples.
- h) What is a modal verb? Discuss with illustration the meanings expressed by different modals.
- i) Analyzing the Purpose and Audience before a communication helps getting effective results. Explain.
- j) Explain contrastive stress and its features with examples.
- k) Distinguish and briefly elaborate the characters of Oral and written communication.
- l) Explain the features of technical communication that make it different from general communication

**Part-III**

**Only Long Answer Type Questions (Answer Any Two out of Four)**

- Q3** What is IPA in English Pronunciation? Discuss in details the guidelines set for English pronunciation using the IPA symbols with examples. **(16)**
- Q4** The attitudes and feelings of the speakers are attached to the way intonation is used. Explain with examples to justify this. Discuss the uses of Falling tone and Rising tone intonation. **(16)**
- Q5** Define communication. Discuss in details the features of Body Language in effective communication. **(16)**
- Q6** Discuss the barriers to communication and the ways to deal with such barriers. **(16)**

Registration No : 

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

**B.Pharm  
15PH103**

**1<sup>st</sup> Semester Back Examination 2019-20**

**HAP - I**

**BRANCH : B.PHARMA**

**Max Marks : 100**

**Time : 3 Hours**

**Q.CODE : HB770**

**Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.**

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

**Part-I**

- Q1      Only Short Answer Type Questions (Answer All-10)      (2 x 10)**
- a) Which organelle is called the power house of cell?
  - b) What is the process of cell Eating known as?
  - c) What is the Normal Heart rate in Human beings?
  - d) Which pigment helps in carrying oxygen in blood?
  - e) What are the Chemicals used at synaptic transmission are called?
  - f) Which section means Dissecting the body in equal two halves?
  - g) Which tissue forms the skin of human body
  - h) What is polymorpho-nuclear leukocyte also known as?
  - i) What is a Suture?
  - j) What is Arthritis?

**Part-II**

- Q2      Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)      (6 x 8)**
- a) Write a note on Muscle tissue and muscle contraction.
  - b) Write a note about nervous tissue with a neat and labeled diagram of neuron and write a note on synaptic transmission.
  - c) Write a note on Anatomical nomenclature.
  - d) Write a note on Lymphatic system of the body.
  - e) Write a note on connective tissue.
  - f) Write a note on blood pressure and hypertension.
  - g) Write a note on conduction system of heart and ECG.
  - h) Write a note on Anemia and Jaundice.
  - i) Write a note on Blood grouping and transfusion.
  - j) Write a note on cell division.
  - k) Draw and describe human heart and its parts.
  - l) Write a note on cardiac cycle and heart sounds.

**Part-III**

- Q3      Only Long Answer Type Questions (Answer Any Two out of Four)      (16)**  
What is tissue? Write a note on Epithelial tissue in human body.
- Q4      (16)**  
Draw and describe the human cell with a neat and labeled diagram. Write a note about Mitochondria and its functions.
- Q5      (16)**  
Write a note on Blood and its components and mention in detail about blood coagulation.
- Q6      (16)**  
Write a note about Skeletal system of Body and its functions. Write a note on different types of joints.



Registration No :

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharm  
15PH102

1<sup>st</sup> Semester Back Examination 2019-20

INORGANIC PHARM CHEMISTRY

BRANCH : B.PHARMA

Max Marks : 100

Time : 3 Hours

Q.CODE : HB627

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

**Part-I**

- Q1**      **Only Short Answer Type Questions (Answer All-10)**      **(2 x 10)**
- a) What is calamine? Give its uses.
  - b) Define universal Antidote? Give the formula.
  - c) Mention the units of radio activity.
  - d) Explain the role of thioglycollic acid in the limit test of iron.
  - e) Write any two effects of impurities in pharmaceutical substances.
  - f) Mention the storage and uses of laughing gas.
  - g) Why dilute HCl is used in the limit test for sulphate?
  - h) What is barium meal? Give its use.
  - i) Why ammonia and potassium cyanide are used in the limit test for heavy metals?
  - j) Define buffer capacity and composition of buffer solution.

**Part-II**

- Q2**      **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**      **(6 x 8)**
- a) Write a note on various types of water listed in I.P.
  - b) Classify topical agents with suitable examples. Mention different actions of astringents.
  - c) Write the principle of limit test for Iron.
  - d) Define expectorants. Give the mechanism of action of expectorants. Write down the monograph of any one inorganic expectorant.
  - e) Write down the application of buffers in pharmacy.
  - f) Illustrate notes on Iodine and its preparation.
  - g) Give notes on pharmaceutical aids used in pharmaceutical industry.
  - h) Classify cathartics basing on their mechanism of action with suitable examples.
  - i) Write down the monograph silver nitrite & hydrogen peroxide.
  - j) Define cough? Explain the mode of action of Emetics.
  - k) Define haematinics. Write down the monograph of Ferrous sulphate.
  - l) Write down different theories of acid and base with examples.

**Part-III**

- Q3**      **Only Long Answer Type Questions (Answer Any Two out of Four)**      **(16)**
- What is an antacid? Classify it. Write down the ideal characteristics of an antacid. Write the monograph of any two antacid.
- Q4**      Explain in details about the physiological acid base balance & the electrolytes used for replacement therapy. Write the role of Oxygen in biological system.      **(16)**
- Q5**      Describe various effects of impurities. Discuss in detail the limit test for arsenic with a neat labelled diagram.      **(16)**
- Q6**      Define the term Abrasive and Dentifrice. Classify the dental product with suitable examples. Write down the monograph of Sodium Fluoride and Strontium Chloride. Describe the role of fluorides in dental care.      **(16)**

Registration No:

--	--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharm  
BP102T

1<sup>st</sup> Semester Regular/Back Examination 2019-20

PHARMACEUTICAL ANALYSIS I

BRANCH : B.Pharma

Max Marks: 75

Time : 3 Hours

Q.CODE : HRB628

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

**Part-A**

**Q1** Only Short Answer Type Questions (Answer All-10) (2 x 10)

- State Acid and Base according to Bronsted-Lowry Theorem with examples.
- Why nitrobenzene is used in precipitation titration?
- Define titrant and titrand.
- What is self indicator? Give an example of it.
- Give examples of masking and demasking agent.
- Differentiate between qualitative and quantitative analysis.
- State Equivalent conductivity.
- Why acetic anhydride is used for preparation of 0.1N perchloric acid?
- Calculate the pH of 100 ml of 0.1 N Hydrochloric acid.
- How to calculate percentage of analyte in gravimetric analysis.

**Part-B**

**Q2** Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE) (7 x 5)

- Illustrate iodometric titration for iodine.
- Prepare and standardize 0.1 N Sodium Hydroxide solution.
- Explain Ostwald theory of acidic and basic indicators.
- Discuss different types solvents used in Non-aqueous titration.
- Write principle and applications of Diazotization titration.
- Describe the principle behind Mohr's method of precipitation titration.
- Explain the various types of EDTA titrations.
- Give the design and working of glass electrode.
- Write in brief about limit test for chlorides.

**Part-C**

**Only Long Answer Type Questions (Answer Any TWO out of FOUR)**

- Q3** Define Errors. Classify it. Discuss the methods to minimize the error. (10)
- Q4** Discuss the different types of conductometric titrations involved in pharmaceutical analysis. Mention its advantages and disadvantages. (10)
- Q5** Explain the construction and working of dropping mercury electrode with neat labeled diagram. (10)
- Q6** Describe the neutralization curve of Strong acid when titrated against strong base. Mention its significance. (10)

Registration No:

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharm  
BP104T

**1<sup>st</sup> Semester Regular/Back Examination 2019-20**  
**PHARMACEUTICAL INORGANIC CHEMISTRY**

**BRANCH : B.Pharma**

**Max Marks: 75**

**Time : 3 Hours**

**Q.CODE : HRB771**

**Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.**

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

**Part-A**

- Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**
- a) Why 20% citric acid is added in limit test for iron?
  - b) What is blue vitriol? Write its formula and uses.
  - c) Mention the methods used for adjusting isotonicity.
  - d) Define anti-microbial agents with suitable examples.
  - e) What is universal Antidote? Give its formula.
  - f) Define haematinics. Name the official compounds of iron used as haematinics.
  - g) What is lugol's solution? Mention its uses.
  - h) Mention the effects of impurities in pharmaceutical substances.
  - i) Name the techniques used for the measurement of radioactivity.
  - j) What is half life of a radioactive material? Mention its significance.

**Part-B**

- Q2 Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE) (7 x 5)**
- a) Discuss about the different sources of impurities found in pharmaceutical substances.
  - b) Mention the ideal characteristics of antacids. Write down the monograph of Aluminum hydroxide gel.
  - c) Define expectorants. Mention its mechanism of action. Write down the monograph of any one inorganic expectorant.
  - d) Classify dental product with suitable examples. Write down the monograph of Sodium Fluoride.
  - e) Write a note on emetics.
  - f) Give the preparation, properties and uses of Hydrogen peroxide and Silver nitrate.
  - g) Write the assay of Sodium chloride and Copper sulphate.
  - h) Mention the sources, deficiency condition, and toxicity of iron in the body. Write the preparation and properties Ferrous sulphate.
  - i) Define expectorants. Give the mechanism of action of expectorants. Write down the monograph of Ammonium chloride.

**Part-C**

- Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR) (10)**  
Describe in detail the limit test for arsenic with a neat labeled diagram.
- Q4 (10)**  
Define and classify astringents with examples. Mention their Mechanism of action. Write the preparation, properties of Potash Alum.
- Q5 (10)**  
Describe the construction and working of G-M counter. Discuss important applications of radio pharmaceuticals.
- Q6 (10)**  
Define antidotes. Classify antidotes basing upon their mechanism of actions. Explain, how cyanide poison affects the body and how it can treated?

Registration No :

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharma  
15PH101

1<sup>st</sup> Semester Back Examination 2019-20

PHARMACEUTICS - I

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB558

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

**Part-I**

- Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**
- a) Calculate the volume of 2kg of glycerine. The density of glycerine is 1.25g/ml.
  - b) Distinguish Lotion and Liniments.
  - c) Differentiate flocculated and deflocculated suspension.
  - d) Distinguish Syrup and Elixirs.
  - e) Define aromatic water.
  - f) Write the full form and meanings of the following abbreviation:  
a.c, b.i.d,p.c, agit.
  - g) Why simple syrup I. P. is self-preservative?
  - h) Define mucilage with example.
  - i) Define pharmacy.
  - j) What is galenicals?

**Part-II**

- Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**
- a) Define and classify emulsion and write the different identification test for emulsion.
  - b) Define and classify dosage form with suitable example. What are the advantages of making dosage form?
  - c) How much quantity of 60%, 50%, 30%, and 20% alcohol to be mixed to get 40% alcohol of 500ml.
  - d) Define powder. Write a short note on effervescent powder.
  - e) Define suppositories. Write a short note on different bases used in suppositories.
  - f) Define mouth washes and gargles. How would you prepare mouthwashes and gargles?
  - g) Discuss the career in pharmacy.
  - h) Define ointment. Write on the different procedure for the preparation of ointment.
  - i) Define elixirs and classify it. Write the methods of preparation of elixirs.
  - j) What is proof spirit? Write the allegation method for alcohol dilution.
  - k) Define and classify emulsion. Write the identification tests for emulsion.
  - l) Define and classify suspension. Write a note on suspending agents.

**Part-III**

- Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)**
- Define prescription. Discuss the different part of it with a neat and labelled prescription model.
- Q4 (16)** Define incompatibility and classify it. Write in details on therapeutic incompatibility with suitable examples.
- Q5 (16)** Define posology and write the factors that influencing dose in posology.
- Q6 (16)** Define extraction. What are the various methods of extraction? Write in details on maceration.



Registration No:

--	--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharm  
BP103T

1<sup>st</sup> Semester Regular/Back Examination 2019-20

PHARMACEUTICS-I  
BRANCH : B.Pharma

Max Marks: 75

Time : 3 Hours

Q.CODE : HRB707

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

**Part-A**

**Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**

- a) How you can calculate child dose according to dilling's formula?
- b) Why clicking sound is found in emulsion preparation?
- c) Name the two reasons responsible for physical incompatibility.
- d) Write down the composition of flexible collodions.
- e) Convert 50% alcoholic preparation to proof spirit.
- f) Name the emulsion identification tests.
- g) What is tablet triturate?
- h) Why tetracycline is not taken with milk for therapeutic use?
- i) Give two examples of preservatives mostly used in suspension.
- j) What is compound tragacanth?

**Part-B**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE) (7 x 5)**

- a) Explain the various solubility enhancement techniques
- b) Discuss the stability problems of emulsion
- c) Illustrate the evaluation of Ointment.
- d) Differentiate between suspension and emulsion
- e) Draw a typical format of prescription and mention the importance of its each part
- f) Calculate the quantity of 40% v/v and 70% v/v alcohol are required to make 200 ml of 50% v/v alcohol.
- g) Differentiate between Ointment and Cream
- h) Discuss the formulation procedure of the elixir
- i) 15 kg weighing child of 5 years age is to be treated with paracetamol whose adult dose is 500mg, then what will be the child dose? Compare the results obtained from two different formulae.

**Part-C**

**Only Long Answer Type Questions (Answer Any TWO out of FOUR)**

- Q3** What is posology? Mention various factors affecting dose calculation. (10)
- Q4** Classify 'Incompatibility'? Discuss different types of 'chemical Incompatibility' with remedy. (10)
- Q5** What are semisolid dosage forms? Write in detail about Suppositories. (10)
- Q6** Define powder, classify it and briefly discuss it. (10)

Registration No : 

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

**B.Pharma  
PH.1.5**

**1<sup>st</sup> Semester Back Examination 2019-20**  
**PHARMACEUTICS - I (DISPENSING & COMMUNITY PHARMACY)**  
**BRANCH : B.Pharma**  
**Time : 3 Hours**  
**Max Marks : 70**  
**Q.CODE : HB560**

**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) Calculate the dose of a drug for child of 8 year age. The adult dose is 300mg.
  - b) Differentiate emulsion and suspension.
  - c) Differentiate lotion and liniments.
  - d) Define dosage form and two examples of biphasic liquid dosage form.
  - e) What is pharmacopoeia? Give two example.
  - f) Define aromatic water and write the uses of it.
  - g) What is tablet triturate?
  - h) Prepare 300 ml of 60% v/v of alcohol from 80% v/v and 20% v/v of alcohol.
  - i) Translate the Latin terms into English: h.s., t.i.d.
  - j) What is the meaning of O.P and U.P of proof spirit?
- Q2      a) Discuss the method of preparation of ointments.      (5)**  
**b) Discuss the method of preparation of suppositories.      (5)**
- Q3      a) Write a notes on factors influencing in determination of dose.      (5)**  
**b) Calculate the dose for child of 7 years old of drug which adult dose is 500mg.      (5)**
- Q4      a) Define incompatibility and write a note on physical incompatibility.      (5)**  
**b) Define extraction and write various methods of it.      (5)**
- Q5      a) Define suspension. Differentiate flocculated and de-flocculated suspension      (5)**  
**b) Write a note on emulsifying agent.      (5)**
- Q6      Define emulsion. Write the advantages and disadvantages of emulsion.      (10)**  
**Describe the method of preparation of emulsion by wet gum method with**  
**suitable example.**
- Q7      Define prescription. Describe different parts of a typical prescription with a      (10)**  
**prescription model.**
- Q8      Write short Notes on any TWO :      (5 x 2)**
- a) Aromatic water.
  - b) I.P
  - c) Powders

Registration No : 

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Pharm  
PH.1.7

**1<sup>st</sup> Semester Back Examination 2019-20**  
**PHARM. CHEMISTRY - I (INORGANIC)**  
**BRANCH : B.Pharma**  
**Time : 3 Hours**  
**Max Marks : 70**  
**Q.CODE : HB629**

**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 are antioxidants? Give two examples.
  - b) Why potassium iodide is used in preparation of iodine solution?
  - c) Explain universal antidote.
  - d) Mention the storage and uses of Laughing gas.
  - e) State pharmaceutical aids. Give two examples of it.
  - f) Define astringent.
  - g) Give the composition of ORS.
  - h) What do you mean by physiological acid base balance?
  - i) Define buffer action and buffer capacity.
  - j) Write down the principle involved in limit test for chloride.
- Q2 a) Write the monograph of Magnesium sulphate. (5)**  
**b) Define Antiseptics and disinfectants. Classify them according to their mechanism of action. (5)**
- Q3 a) What precautions are to be taken during handling of radiopharmaceuticals? (5)**  
**b) Give a note on role of iodine in human body. (5)**
- Q4 Discuss in detail the different sources of impurities found in pharmaceutical substances. (10)**
- Q5 a) Write down the preparation, properties and uses of any two inorganic antacids. (5)**  
**b) What are topical agents? Classify it. Write down the mechanism of action of antimicrobial agents. (5)**
- Q6 a) Discuss about G.M. counter. (5)**  
**b) Write down the monograph of Alum and Silver Nitrate. (5)**
- Q7 Explain in detail the limit test of Arsenic along with a neat and labelled diagram. (10)**
- Q8 Write short Notes on any TWO : (5 x 2)**
- a) Irritant Purgatives.
  - b) Limit Test of Chloride.
  - c) Expectorant
  - d) Concepts of acids and bases.

Registration No :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 02

B.Pharm  
15PH106

1<sup>st</sup> Semester Back Examination 2019-20

REMEDIAL MATHEMATICS

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB926

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Find the quadratic equation whose roots are 3 and 5.
- What is non-singular matrix?
- Define median with suitable example.
- Find the value of  $\sin 75^\circ$
- Find the area of the triangle whose vertices are  $A(6,3)$ ,  $B(-3,5)$  and  $C(4, -2)$
- Write the equation to the straight line cutting off intercepts 3 and 2 from the axes.
- Evaluate:  $\lim_{x \rightarrow 3} (x + \frac{1}{x})$
- Calculate the second derivative of  $f(x) = 4 - x^2$
- Evaluate:  $\int \frac{x}{\sqrt{x+a}} dx$
- Evaluate:  $\int_{-2}^1 5 dx$

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Solve :  $2x^4 + 9x^3 + 8x^2 + 9x + 2 = 0$
- Solve by Cramer's rule the equations :  $3x + 5y - 7z = 13$   
 $4x + y - 12z = 6$   
 $2x + 9y - 3z = 20$
- If  $A = \begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$ , Prove that  $A^3 = A^{-1}$
- Find the mean for the following frequency distribution :
 

<b>Wages(Rs):</b>	20-30	30-40	40-50	50-60	60-70
<b>Number of labourers:</b>	3	5	20	10	5
- Find the value of  $\cos 36^\circ$
- Prove that the points are  $(a, 0)$ ,  $(0, b)$  and  $(1, 1)$  are collinear if  $\frac{1}{a} + \frac{1}{b} = 1$
- Find the equations of the altitudes of the triangle whose vertices are  $A(6, -1)$ ,  $B(3, -8)$  and  $C(3, 2)$
- Evaluate:  $\lim_{x \rightarrow 0} (\frac{e^x + e^{-x} - 2}{x})$
- if  $y = x \log y$ , prove that  $x \frac{dy}{dx} = \frac{y^2}{y-x}$
- Find  $\frac{dy}{dx}$  if  $y = (\cos x)^{\cos x}$
- Solve:  $\int \frac{1}{\cos^2 x \sin^2 x} dx$
- Evaluate:  $\int x \sin \frac{x}{2} dx$

**Part-III**

**Only Long Answer Type Questions (Answer Any Two out of Four)**

**Q3** What are the types of matrices with suitable examples? **(16)**

**Q4** Find the mean, median and mode from the following data : **(16)**

<b>Wages (in Rs.)</b>	20-30	30-40	40-50	50-60	60-70
<b>No. of labourers</b>	4	5	20	10	4

**Q5** What is the slope point and two point form of a line? Find the equations of the straight line passing through  $(a\cos\alpha, a\sin\alpha)$  and  $(a\cos\beta, a\sin\beta)$ . **(16)**

**Q6** What is partial fraction and Evaluate:  $\int \frac{1}{(x^2+1)(x+1)} dx$  **(16)**