



FACULTY OF PHARMACY
B. Pharmacy I Year (Supple.) Examination, Oct./Nov. 2012
ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all questions. All questions carry equal marks.

1. a) i) Discuss the properties and functions of muscle tissue. (7+7)
ii) Write about active transport.
- OR
- b) i) What are the functions of skeletal system ? (4+10)
ii) Describe the following bones with diagram :
i) Atlas
ii) Radius
iii) Humerus
iv) Ulna.
2. a) i) Define synapse. Explain about neurotransmission at synapse. (4+10)
ii) What are the functions of sympathetic nervous systems ?
- OR
- b) i) Classify and write the functions of WBC. (7+7)
ii) What are the factors affecting blood pressure ?
3. a) i) Discuss the anatomy of small intestine. (8+6)
ii) Explain the following terms :
1) Hypoxia
2) Vital capacity
3) Dyspnoea.

OR



- b) i) What are the functions of glucocorticoids ? (6+8)
ii) Discuss about following :
i) Graves disease
ii) Diabetes mellitus.
4. a) Discuss the anatomy of ear with diagram. 14
OR
b) i) Discuss about physiology of urine formation. (10+4)
ii) Describe the anatomy of taste bud.
5. a) i) Write about intrauterine contraceptive devices. (7+7)
ii) What are various deficiency disorders of
a) Vit. D
b) Vit. A.
OR
b) a) Write about edema and shock. (10+4)
b) Write about embolism.
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FACULTY OF PHARMACY
B.Pharmacy I Year (Suppl.) Examination, Oct./Nov. 2012
BIOLOGY

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all questions. All questions carry equal marks.

1. A) i) Describe the internal structure of Monocot stem with a neat labeled diagram. 7
ii) Explain different phases and significance of Mitosis. 7
OR
B) i) Define Inflorescence ? Explain different types of Racemose inflorescence. 7
ii) Draw the structure of a Monocotyledonous seeds and label its parts. 7
2. A) i) Describe the vegetative and floral characteristics of Apocynaceae. 7
ii) Write a note on economic importance of Umbelliferae. 7
OR
B) i) Describe the Distinguishing characteristics of the family Leguminosae. 8
ii) Write the characters, floral formula and floral diagram of Scrophulariaceae. 6
3. A) i) Explain the process of Respiration taking place in plants. 14
OR
B) i) Write a note on polyploidy. 7
ii) Explain the process of Absorption of water in plants. 7
4. A) i) Draw a neat labeled diagram of digestive system of frogs. 7
ii) Discuss the histology of skeletal muscle of Rabbit. 7
OR
B) i) Discuss the histology of Rabbit Kidney. 7
ii) Draw a neat labeled diagram of the internal structure of frogs heart. 7
5. A) i) Describe the life history of mosquito and the diseases spread by mosquito. 14
OR
B) i) Give the life history of Taenia solium. 8
ii) Give the Morphology and life cycle of Entamoeba histolytica. 6



FACULTY OF PHARMACY
B.Pharmacy I Year (Suppl.) Examination, Oct./Nov. 2012
BASIC COMPUTER APPLICATIONS

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all Questions. All Questions carry equal marks.

1. a) i) Draw the flowchart to arrange the given 'n' numbers descending order and find the sum of first two numbers in the descending order sequence.
ii) What are the features of unix-operating system and compare with windows ?

OR

- b) i) Write the structure of disks and explain.
ii) Draw the block diagram of computer and explain.

2. a) i) List all the arithmetic, relational and logical operators in the order of precedence.
ii) Define a variable and constant. Give examples.
iii) Give example for if-then-else nested statement.

OR

- b) i) Compare while-statement and for-statement with syntax, example and number of times the loop executes.
ii) Write syntax of do-while statement.
iii) Write a C-program to computer the maximum element in a 50-element array.

3. a) i) Explain the formatting texts, paragraph and spellings and grammar features in MS-Word.
ii) Explain the usage of MS-Word and MS-Excel.

OR

- b) i) Explain the various page formatting options for a report.
ii) What are the various options to draw graphs and charts ? Explain.



4. a) i) Explain the sequence of different options that you can provide for a power point slide presentation, starting from the creation of slide.
ii) Write the forms, form controls in MS-Access.

OR

- b) i) Illustrate with various transitions and animation and discuss.
ii) Give an overview of different types of filtering techniques. Explain.
5. a) i) Explain the differences between access and SQL-server.
ii) Give an overview of pharmaceutical resources in www.

OR

- b) i) Evaluate the chemical database design using query options. List some query options for searching.
ii) Write short notes on :
1) HTML.
2) E-mail.



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Code No. : 2653

FACULTY OF PHARMACY
B. Pharmacy I Year (Supple.) Examination, Oct./Nov. 2012
PHARMACEUTICS – I
(General and Dispensing Pharmacy)

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all questions. All questions carry equal marks.

1. a) Discuss in brief about a monograph in I.P. 10
b) Write a note on development of pharmaceutical education in India. 4
- OR
- c) Convert the following : (6+4)
i) 15° OP and 60° UP to percentage V/V.
ii) Calculate the volume of 95% alcohol required to prepare 600 ml of 60% alcohol ?
- d) Write a note on pharmacy as a career. 4
2. a) Define prescription. Write a note on colors, flavours and sweeteners used in prescription. (2+5)
b) Write the sources of errors likely to be committed while dispensing a prescriptions and how do you rectify them. 7
- OR
- c) Write a short notes on : (3+3)
i) Prescription container
ii) Labelling and packing of container.
- d) Define dosage form and write the advantages and disadvantages of dosage form. 8
3. a) Discuss briefly about instability of Emulsion. 7
b) Discuss briefly about preparation of syrup. 7

OR



- c) Write the principle and procedure for the following : (4+4)
i) White liniments ii) Calamine lotions.
- d) Write the differences between : 6
i) Eyedrops Vs eardrops
ii) Suspension Vs Emulsions.
4. a) Identify the type of incompatibility in the following prescription and write the method to overcome. 7
- | | |
|----------------------------------|-------|
| R _x Sodium salicylate | 15 gm |
| Caffeine citrate | 10 gm |
| Water | 75 ml |
- b) Write the method of preparation of the following : 7
i) Effervescent of granules ii) Cold cream.
- OR
- c) Explain various classes of incompatibilities by giving suitable examples. 9
Mention methods to overcome them.
- d) Write the different methods of preparation of suppositories. 5
5. a) Discuss in brief about continuous hot percolation with suitable examples. 9
- b) Write a note on containers of medicinal gases. 5
- OR
- c) Discuss in detail about therapeutic and diagnostic uses of Radiopharmaceuticals. 7
- d) Define Tinctures and Entracts. Write some official preparation of Tinctures as per I.P. 7



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FACULTY OF PHARMACY
B.Pharmacy I Year (Suppl.) Examination, Oct./Nov. 2012
PHARMA. INORGANIC CHEMISTRY

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all questions. All questions carry equal marks.

1. a) 1) Explain the principle and procedure involved in the
i) Limit test for chloride ii) Limit tests for sulphate. 8
- 2) Differentiate between anions and cations. Give the identification tests for
i) Sodium ii) Chloride. 6
- OR
- b) 1) Explain the principle and procedure involved in the limit test for lead. 8
- 2) What do you mean by impurities ? How the impurities do get incorporated
in pharmaceutical substances ? 6
2. a) 1) What are electrolyte replenishers ? List out the different solution of sodium
chloride and give the preparation of any one. 8
- 2) Write the method of preparation, properties and uses of
i) Magnesium sulphate ii) Sodium citrate. 6
- OR
- b) 1) Write a brief note on acid-base regulators. Give the preparation and uses
of ammonium chloride. 8
- 2) Give the method of preparation and uses of magnesium carbonate and
sodium citrate. 6
3. a) 1) What are Antioxidants. Give the list of the various antioxidants that are
official in IP. 3
- 2) Write a brief note on desiccants and suspending agents. 5
- 3) Give the method of preparation and uses of
i) Activated charcoal ii) Aluminium sulphate. 6
- OR



- b) 1) Describe the importance of zinc in the body. Write the method of preparation properties and uses of zinc chloride. 8
- 2) What are haematinics ? Give the preparation and assay of ferric ammonium citrate. 6
4. a) 1) What are antidotes ? Give the preparation properties and application of
i) Sodium thio sulphate ii) sodium nitrite. 8
- 2) Write a note on inhalants. 6

OR

- b) 1) What are emetics ? Give the preparation properties and application of
i) Potassium antimony tartarate ii) Zinc sulphate. 8
- 2) What are expectorant ? Give the preparation and assay of ammonium chloride. 6
5. a) 1) What are astringents ? Give the preparation, properties and uses of
i) Zinc oxide ii) Bismuth subcarbonate. 8
- 2) Write a note on :
i) Oral antiseptics ii) Diagnostic agents. 6

OR

- b) 1) What are anticaries agents ? What is the role of fluoride as anticaries ?
List out the official fluoride compounds. 6
- 2) Give the preparation and assay of
i) Potassium bromide IP ii) Boric acid IP. 8

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Code No. : 2654

FACULTY OF PHARMACY
B. Pharmacy I Year (Suppl.) Examination, Oct./Nov. 2012
MATHEMATICS

Time: 3 Hours]

[Max. Marks: 70

Note : Answer *all* questions.

All questions carry *equal* marks.

1. a) i) If $\frac{\log x}{b-c} = \frac{\log y}{c-a} = \frac{\log z}{a-b}$ then show that $x^a y^b z^c = 1$.

ii) Prove that $\sin^2\left(\frac{2\pi}{3}\right) + \log^2\left(\frac{5\pi}{6}\right) - \tan^2\left(\frac{3\pi}{4}\right) = \frac{1}{2}$.

OR

b) i) If $\frac{\log a}{1} = \frac{\log b}{2} = \frac{\log c}{5}$ then find the value of $\frac{a^4 b^3}{c^2}$?

ii) If $\tan \theta = \frac{a}{b}$, find $\frac{a \sin \theta + b \cos \theta}{a \sin \theta - b \cos \theta}$.

2. a) i) Find the derivative of the function $\sqrt{\sin \sqrt{x}}$.

ii) If $f(x) = x^2 \sin(1/x)$ when $x \neq 0$ and $f(0) = 0$, show that f is derivable for every value of x but the derivative is not continuous for $x = 0$.

OR

b) i) Find the extreme values of $f(x) = 5x^6 + 18x^5 + 15x^4 - 10$.

ii) If $u = ax + 6y + 8z^2$ and $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial^2 u}{\partial z^2} = 0$, find the value of a .

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3. a) i) Evaluate $\int \sqrt{a^2 - x^2} dx$.

ii) Evaluate $\int \frac{1+x \log x}{x} e^x dx$.

OR

b) i) Evaluate $\int \frac{\sin(\log x)}{x} dx$

ii) Evaluate $\int \frac{x^2 + 2x + 5}{(x+2)(x-1)(3x-1)} dx$.

4. a) i) Define rank of the matrix. Find the rank of the matrix $A = \begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$.

ii) If $A = \begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 3 \end{bmatrix}$, find A^{-1} .

OR

b) i) Solve, with the help of matrices, the simultaneous equations $x + y + z = 3$; $x + 2y + 3z = 4$; $x + 4y + 9z = 6$.

ii) By using the Gauss elimination method, solve the system of equations $2x + y + 4z = z$; $x + 3y - 2z = 7$; $5x + 3y - 5z = -8$.

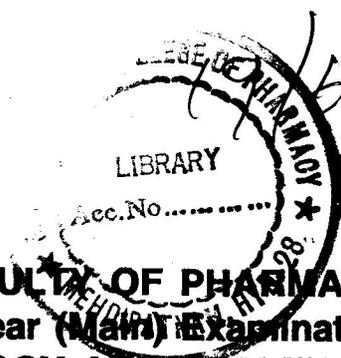
5. a) i) Find the equation of the straight line passing through the point $(-2, 1)$ and parallel to $4x - 7y + 3 = 0$.

ii) Derive the equations of straight line and explain the equation $y = mx + c$. How do you determine m . What is the important of m and c in biological data interpretation.

OR

b) i) Explain about various linear and non-linear graphs and their importance in representing biological data and their comparison.

ii) Find the equation of the circle passing through the point $(3, -4)$ and concentric with $x^2 + y^2 + 4x - 2y + 1 = 0$.



Code No. : 6501/M

FACULTY OF PHARMACY
B.Pharmacy I Year (Main) Examination, June 2012
ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION (APHE)

Time : 3 Hours]

[Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

1. a) i) Discuss the properties and functions of osteous tissue. 8
ii) Write a note on membrane permeability. 6

OR

- b) i) Explain the various parts of bones with neat diagrams : 8
A) Humerus B) Radius
C) Tibia D) Lumbar.

- ii) Discuss the functions of connective tissue. 6

2. a) i) Discuss the physiology of nerve impulse. 8
ii) Give the characteristics of Red blood cells. What are its functions ? 6

OR

- b) i) Discuss the composition and functions of blood. 8
ii) Explain the following terms : 6
A) Cardiac cycle. B) Plexus.

3. a) i) Discuss the anatomy of organs of the alimentary canal. 10
ii) Explain the terms : 4
A) Vital capacity B) Anoxia.

OR

- b) i) Discuss the enzymes involved in the digestion of proteins, carbohydrates and fats. 10
ii) What are the functions of parathyroid gland ? 4



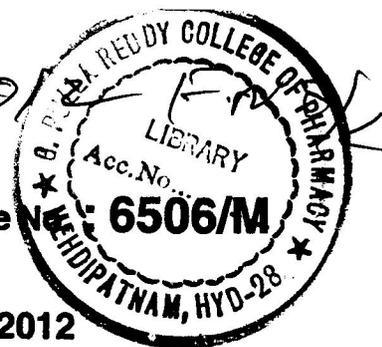
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4. a) i) Explain the physiology of eye with diagram. 10
ii) Write a note on skin as a sense organ. 4
- OR
- b) i) Explain the anatomy and physiology of nephron. 10
ii) What are the functions of tongue ? 4
5. a) i) Explain the various methods of contraception. 10
ii) Write a note on neoplasms. 4
- OR
- b) i) What is inflammation ? Explain the various steps involved in it. 10
ii) Write a note on thrombosis. 4
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25/6/20



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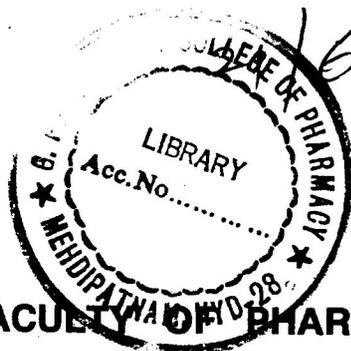
FACULTY OF PHARMACY
B. Pharmacy I Year (Main) Examination, June 2012
BIOLOGY

Time: 3 Hours]

[Max. Marks: 70

Note : Answer all questions. All questions carry equal marks.

1. A) i) Explain the living inclusions of a plant cell. 10
ii) Write a short note on Phyllotaxy. 4
OR
- B) i) Define modification and describe different aerial and sub-aerial stem modifications with examples. 10
ii) Define Placentation and its types. 4
2. A) i) Give the floral formula, floral diagram and economic importance of Caesalpinieae. 7
ii) Write a note on economic importance of Solanaceae. 7
OR
- B) i) Describe the vegetative and floral characteristics of Rubiaceae. 7
ii) Describe the floral characteristics of Apocyanaceae with its medicinal importance. 7
3. A) i) Explain the process of photosynthesis in plants. 14
OR
- B) i) Write about replication of DNA. 7
ii) Write a note on Hybridization. 7
4. A) i) Discuss the physiology of respiration in frog. 7
ii) Draw a neat labelled diagram of female reproductive system of frog. 7
OR
- B) i) Discuss the histology of Rabbit Pancreas. 7
ii) Draw the structure of animal cell. 7
5. A) i) Describe the life history of housefly. 7
ii) Describe the life cycle of Ascaris. 7
OR
- B) i) Describe the life cycle of Leishmania and the disease caused by it. 7
ii) What is the role of mosquito in the spread of malaria and mention its prevention and therapy? 7



Code No. : 6502/M

FACULTY OF PHARMACY
B.Pharmacy I Year (Main) Examination, June 2012
PHARMACEUTICAL INORGANIC CHEMISTRY

Time : 3 Hours]

[Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

1. a) i) Write the classification of pharmaceutical inorganic compounds based on their applications with examples. **8**
- ii) Give the principle and procedure involved in the limit test for Iron. **6**
- OR
- b) i) Define a term limit test, give the principle and procedure involved in limit test for Arsenic. **(1+7)**
- ii) How do you identify group – IV cations with chemical reactions. **6**
2. a) i) What are Antacids ? Give the preparation, properties and assay of magnesium carbonate and Aluminium hydroxide. **(1+8)**
- ii) Write a brief note on Haemo dialysis fluids. **5**
- OR
- b) i) What are calcium replenishers ? Give the preparation, properties, assay and uses of calcium chloride and calcium gluconate. **(1+8)**
- ii) Give a note on Laxatives. **5**
3. a) i) Define Haematinics. Give a preparation, assay, test for purity and uses of ferrous gluconate and ferrous fumarate. **(1+8)**
- ii) Give a note on Excipients. **5**

OR



4. a) i) Discuss methods of preparation of ointments. 8
ii) Write a note on coca butter. 6
OR
- b) i) Give a note therapeutic incompatibility. 5
ii) Write the type of incompatibility and method to overcome the incompatibility in the following.
- A) Px. 4
Phenobarbital Sodium – 1 gm
NH₄ Br — 0.2 gm
Water upto 30 ml.
- B) Px. 5
Borax – 2 gm
Glycerine – 10 ml
NaHCO₃ – 0.5 gm
Water upto 30 ml
5. a) i) Write the applications of Radiopharmaceuticals. 6
ii) Explain percolation process of extraction with a neat sketch. 8
OR
- b) i) Write about the containers, filling, handling and storage of medical gases. 6
ii) Write the different types of extracts with its applications. 8



4. a) Write short notes on the following :

- i) MS power point basics
- ii) Transition and animations
- iii) Templates.

OR

- b) i) Explain the data base concepts.
ii) Write about the queries and forms with examples.

5. a) Explain the following :

- i) Internet browser
- ii) Pharmaceutical resources in WWW
- iii) Search engine
- iv) Structure and organisation of WWW.

OR

- b) i) Write about chemical data base design and their tools.
ii) Briefly explain about SQL commands.

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Code No. : 6505/M

FACULTY OF PHARMACY
B.Pharmacy I Year (Main) Examination, June 2012
BASIC COMPUTER APPLICATIONS

Time: 3 Hours]

[Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

1. a) i) Explain types of memory chips.
ii) Write the basic structure and characteristics of computers.

OR

- b) i) What are the principles of flow chart ? Give an example.
ii) Briefly discuss about the computer viruses.

2. a) i) Explain all the airthmatic operators with example.
ii) Briefly discuss about while..do statement of C with suitable example.

OR

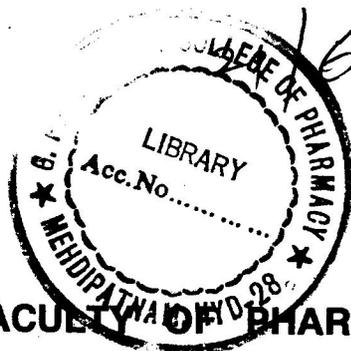
- b) i) What are the arrays ? Explain the pointers to an array.
ii) Explain the types of I/O functions.

3. a) i) Write about the important features of MS-WORD.
ii) What is Excel ? Explain the important features of Excel.

OR

- b) i) Give an overview of different types of charts available with MS-Excel.
ii) What are the tools available in MS-Office ? Give a detailed account.





Code No. : 6502/M

FACULTY OF PHARMACY
B.Pharmacy I Year (Main) Examination, June 2012
PHARMACEUTICAL INORGANIC CHEMISTRY

Time : 3 Hours]

[Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

1. a) i) Write the classification of pharmaceutical inorganic compounds based on their applications with examples. **8**
ii) Give the principle and procedure involved in the limit test for Iron. **6**
OR
- b) i) Define a term limit test, give the principle and procedure involved in limit test for Arsenic. **(1+7)**
ii) How do you identify group – IV cations with chemical reactions. **6**
2. a) i) What are Antacids ? Give the preparation, properties and assay of magnesium carbonate and Aluminium hydroxide. **(1+8)**
ii) Write a brief note on Haemo dialysis fluids. **5**
OR
- b) i) What are calcium replenishers ? Give the preparation, properties, assay and uses of calcium chloride and calcium gluconate. **(1+8)**
ii) Give a note on Laxatives. **5**
3. a) i) Define Haematinics. Give a preparation, assay, test for purity and uses of ferrous gluconate and ferrous fumarate. **(1+8)**
ii) Give a note on Excipients. **5**

OR

25/6/12 F.V O/C



Code No. : 6504/M

FACULTY OF PHARMACY
B.Pharmacy I Year (Main) Examination, June 2012
MATHEMATICS

Time : 3 Hours]

[Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

1. a) 1) If $a^x = b^y = c^z$ and $y^2 = 2x$, prove that $\log_b a = \log_c b$.
2) Prove that $A + B = 45^\circ \Leftrightarrow (1 + \tan A)(1 + \tan B) = 2$. Hence show that

$$\tan 22\frac{1}{2}^\circ = \sqrt{2} - 1.$$

OR

- b) 1) If $(3.4)^x = (0.034)^y = 10000$ find the value of $\frac{1}{x} - \frac{1}{y}$.

- 2) In a triangle ABC, prove that

$$\sin 2A + \sin 2B - \sin 2C = 4 \cos A \cos B \sin C.$$



2. a) 1) Prove that $\lim_{x \rightarrow 3} \frac{x^3 - 8x^2 + 45}{2x^2 - 3x - 9} = -\frac{7}{3}$.

- 2) Find $\frac{dy}{dx}$ if $x = a \cos^2 \theta$, $y = b \sin^2 \theta$.

OR

- b) 1) Using first principle find the derivative of $\sin x$.

- 2) Find the maximum and minimum values of $f(x) = x^3 - 6x^2 + 9x + 15$.

3. a) 1) Evaluate $\int \frac{1}{3 + 5x - 2x^2} dx$.

- 2) Evaluate $\int \frac{2x + 3}{3x^2 + 14x - 5} dx$

OR

- b) 1) Evaluate $\int \frac{1}{5 + 4 \cos x} dx$.

- 2) Evaluate $\int \frac{1}{(2x + 3)\sqrt{x + 2}} dx$.

(This paper contains 2 pages)

4. a) 1) If $A = \begin{bmatrix} 6 & 2 & -2 \\ -2 & 2 & 2 \\ 2 & 2 & 2 \end{bmatrix}$ show that $(A - 2I)(A - 4I) = 0$.

2) Find the rank of $\begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 2 & 1 \end{bmatrix}$.

OR

b) 1) Show that $\begin{vmatrix} b+c & c+a & a+b \\ a+b & b+c & c+a \\ a & b & c \end{vmatrix} = a^3 + b^3 + c^3 - 3abc$

2) If $A = \begin{bmatrix} 2 & 0 \\ 3 & -5 \end{bmatrix}$ show that $A^2 + 3A - 10I = 0$.

5. a) 1) Find the equation of line passing through the point $(2, -3)$ and having intercepts whose ratio is $3 : 2$.
- 2) Show that the points $(-6, 0)$, $(-2, 2)$, $(-2, -8)$ and $(1, 1)$ are concyclic.

OR

- b) 1) Find the equation of line dividing the line segment joining $(2, 3)$, $(4, -5)$ in the ratio $2 : 3$ and having slope $-\frac{3}{2}$.
- 2) Find the circle which passes through $(-1, 2)$, $(-4, 5)$ and has its centre on the line $x - 2y = 0$.