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Total Number of Pages : 01

M. Pharm  
M.PH2C.5

**2<sup>nd</sup> Semester Regular/Back Examination 2018-19**

**PHYTO-PHARMACEUTICAL ANALYSIS**

**BRANCH : ANALYSIS & QUALITY ASSURANCE**

**Time : 3 Hours**

**Max Marks : 70**

**Q.CODE : F400**

**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 fractional distillation and its working principle?
  - b) Name the Visualizing agents used in TLC for the detection of Alkaloids and amino acids.
  - c) Write the formula for determination of percentage purity of a drug by using lycopodium spore method.
  - d) What is Extractive value and its significance?
  - e) What are disintegrating agents and its importance in microscopy technique?
  - f) Water, Petroleum ether, benzene, methanol, acetone and chloroform, arrange these solvents in increasing order of polarity.
  - g) Give two examples of Bio target molecules used in HTS Technique.
  - h) Write down the name of analytical techniques useful for analysis of pesticide residue content of a crude drug.
  - i) Define the microbiological terms MIC and ZOI values.
  - j) What is adulteration? Give example of adulteration by exhausted drugs
- Q2 a) What is proximate analysis? What is the role of UV light in crude drugs analysis? (5)**  
**b) Write down the procedures involved for determination of different Ash values of a crude drug. (5)**
- Q3 a) Determination of Tannins content of a drug as per WHO protocol. (5)**  
**b) Write a note on Bio-autography technique and its advantages. (5)**
- Q4 a) Write down the role of HTS in new drug discovery from natural product. (5)**  
**b) Classify the Ayurvedic formulations with suitable examples. Write down the procedure for determination of pH of a liquid herbal formulation. (5)**
- Q5 a) Write a notes on Stomatal number and Stomatal index. (5)**  
**b) Explain the different primary factors responsible for deterioration of storage crude drugs. (5)**
- Q6 Write in details about the different physical and chemical methods useful for isolation and separation of phytoconstituents from a crude drug. (10)**
- Q7 Write about the methodology adopted to find out the antimicrobial activity of plant products. Explain with examples. (10)**
- Q8 Write short notes (any TWO) : (5 x 2)**
- a) What are different microchemical testing of a drug and its advantages?
  - b) Determination of bitterness principle of a crude drug as per WHO protocol
  - c) What is super critical fluid and how it is useful for extraction of phytochemicals.