UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2021

Course: Pharmacognosy and Phytochemistry 1   Semester: IV
Program: B. Pharm   Time: 03 hrs.
Course Code: BP405T   Max. Marks: 75
Instructions: All the sections are compulsory.

SECTION A

S. No.	CO		Marks
		Answer all the questions.	**20**
1.	**CO1**	The term Pharmacognosy was coined by A. Aristotle B. Hippocrates C. Galen D. Seydler	1
2.	**CO1**	Classification of crude drugs based on botanical classification is known as A. Alphabetical Classification B. Therapeutic Classification C. Taxonomical Classification D. Chemical Classification	1
3.	**CO1**	A supplier of crude drugs received an order to supply 5 kg of *Swertia chirata*. Since he could arrange on 4 kg of the drug he added 1 kg of *Swertia minor* to it, labelled the package as *Swertia chirata* and supplied it. What is this partial substitution of a crude drug with another one called? A. Substitution B. Mixing C. Adulteration D. Allied drug	1
4.	**CO1**	Oldest written document based on Ayurveda is A. Materia Medica B. Papyrus Ebers C. Charaka Samhita D. Sushruta Samhita	1
5.	**CO2**	Dirt, vegetable debries and foreign organic matter are removed from a crude drug by A. Drying B. Garbling C. Harvesting D. Packing	1
6.	**CO2**	Aloe is packed in A. Aluminium foil B. Paper bags C. Goad skin D. Gunny bags	1
7.	**CO2**	Ethylene is present in high concentrations in which of the following plant parts? A. Young leaves B. Meristematic regions C. Buds D. Ripening fruits	1
8.	**CO2**	Identify the name of the scientist who pioneered the field of plant tissue culture. A. Haberland B. Aristotle C. Newton D. Gautheret	1

9.	**CO3**	Identify the part of plant used for tissue culturing.
		
		    A. Scion B. Explant
		    C Stock D. Callus
			1

10.	**CO3**	Which of following can be used for production of secondary metabolites using tissue culture?
		
		    A. Cell suspension B. Protoplast
		    C Auxiliary buds D. Meristem
			1

11.	**CO3**	Protoplast is cell devoid of
		
		    A. Cell membrane B. Cell wall
		    C Both cell wall and cell membrane D. None of these
			1

12.	**CO3**	Cellular totipotency is the property of
		
		    A. Plants B. Animals
		    C Bacteria D. All of these
			1

13.	**CO4**	Unani system is based on principles of
		
		    A. 4 humours B. 5 humours
		    C 6 humours D 7 humours
			1

14.	**CO4**	Chinese system is based on cosmology of
		
		    A. Yin and Yang B. Bin and Bang
		    C Kin and Kang D. Yin and Zang
			1

15.	**CO4**	How many carbon atoms are present in diterpenoids?
		
		    A. 10 B. 15
		    C 20 D. 25
			1

16.	**CO4**	Senna mainly contains
		
		    A. O glycosides B. C glycosides
		    C N glycosides D. S glycosides
			1

17.	**CO5**	Jute is obtained from which part of the plant
		
		    A. Wood B. Stem
		    C Leaves D Roots
			1

18.	**CO5**	Identify the enzyme which is obtained from juice of pineapple.
		
		    A. Pepsin B. Bromelin
		    C Papain D. Trypsin
			1

19.	**CO5**	_____is an important chemical constituent of honey.
		
		    A. Glucose B. Fructose
		    C Maltose D. Invert sugar
			1

20.	**CO5**	Which of the following oils is used as laxative.
		
		    A. Linseed B. Castor
		    C Arachis D. Mustard
			1

		SECTION B	
Answer any two questions of the following.			**20**
1.	**CO1**	Classify different types of adulteration in crude drugs. Explain in brief any two methods for detecting adulteration.	**6+4**
2.	**CO2**	Explain any two methods used for crop improvement with suitable examples	**10**
3.	**CO5**	Describe the biological sources, active constituent and one important use of a. Acacia b. Castor oil c. Honey d. Cotton	**2.5X4**
		SECTION C	
Answer any seven questions of the following.			**35**
1.	**CO1**	Categorise various methods of physical evaluation for crude drugs	**5**
2.	**CO2**	*Swertia chirata* is an endangered species. Suggest a technique for its conservation. Why did you selected this technique?	**5**
3.	**CO3**	Describe the components of plant tissue culture media	**5**
4.	**CO4**	Differentiate between primary and secondary metabolites with specific examples	**5**
5.	**CO5**	Define teratogens. Give three examples of natural teratogens.	**5**
6.	**CO3**	What are advantages and disadvantages of edible vaccines?	**5**
7.	**CO4**	Explain in brief the principle and procedure for hot continuous extraction.	**5**
8.	**CO3**	Crude drug samples were subject to following tests and the observations are mentioned as below. Identify the secondary metabolites present in each crude drug: i. Ferric chloride test → Dark blue or greenish black color ii. Dragendroff's reagent (K+ bismuth iodide solution)→ Red brown ppt iii. Wagner's reagent (iodine K+ iodide solution)→ Red brown ppt iv. 3,5-Dinitro benzoic acid test → Pink color v. Keller – Kiliani test → Reddish brown layer → turns to bluish green	**5**
9.	**CO4**	Define glycosides. Discuss in brief the chemical tests used for identifying glycosides.	**5**
		Total	**75**