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END SEMESTER EXAMINATION - 2019

Semester : 6th (Regular)

Subject Code : FPT-603

TEA, COFFEE AND COCOA PROCESSING

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

1. Question No. 1 is compulsory.
2. Answer any *five* questions from questions nos. 1 to 6 of PART - B.

PART - A

Marks - 25

1. Answer each of the following question in a word or single sentence as directed : $1 \times 25 = 25$
 - (a) What is the percentage of catechins in dry leaves ?
 - (b) What is the percentage of moisture present in tea after withering ?

[Turn over

(c) Plucking table is when tea is pruned and kept at a considerable height to be plucked by tea pluckers. (Write true/false)

(d) When cocoa cake is obtained ?

(e) Cocoa butter is a bi-product in cocoa processing. (Write true/false)

(f) What is the temperature of withering in tea processing ?

(g) _____ is a bi-product of cocoa. (Fill in the blank)

(h) What is the gap between each row of shrubs in tea cultivating field ?

(i) Coffee beans are obtained from _____. (Fill in the blank)

(j) What is the maturity period of coffee seed ?

(k) Which Act is applicable for waste maintenance in tea industries ?

(l) Which part of tea is best known for its taste ?

(m) Which polyphenols is most dominant in tea ?

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(2)



(n) Cocoa are obtained from _____. (Fill in the blank)

(o) Why leaf disruption step is important ?

(p) In which part of tea plant highest levels of polyphenols are present ?

(q) Where activity of polyphenol oxidase is most ?

(r) Theaflavins provide the attribute _____ and _____ to tea. (Fill in the blanks)

(s) How theaflavins are formed ?

(t) What is the percentage of thearubigins in dry weight of black tea ?

(u) Which of the following is NOT a step in Black tea manufacture ? (Choose the correct option)

(i) Drying/Firing

(ii) Rolling

(iii) Withering

(iv) Lump formation

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(3)



[Turn over

(v) Difference of Green tea from Black tea is that (Choose the correct option)

- (i) the oxidation process is omitted
- (ii) the tea leaves are steamed in a pan before being rolled so that the enzymes do not interact with air and oxidize
- (iii) Both (i) and (ii) mentioned above
- (iv) None of the mentioned above

(w) Ripened berries sink in water and unripe ones float on water. (Write true / false)

(x) The process of tasting coffee is called _____.
(Choose the correct option for blank space)

- (i) Cupping
- (ii) Green Coffee
- (iii) Both (i) and (ii) mentioned above
- (iv) None of the mentioned above.

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(4)



(y) Which of the following is untrue ?

- (i) The coffee beans after milling are called 'Green Coffee'.
- (ii) Roasting converts green coffee into brown coffee beans.
- (iii) During roasting, the coffee beans are heated in absence of oxygen called pyrolysis. They are kept moving so that they are de-void of moisture but at the same time do not get burnt.
- (iv) None of the mentioned above.

PART - B

Marks - 45

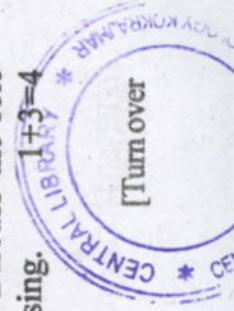
1. Define Tea. What are the different species of tea used for processing ? Discuss about the present status of tea production in India and compare the data with global production. 1+2+6=9

2. (a) How tea can be classified according to the different processing conditions ? Show the different processing steps of each. 2+3=5

(b) What is withering of tea ? Discuss the role of withering in tea processing. 1+3=4

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(5)



3. (a) List out the various composition of mucilage and coffee pulp in percentage level and discuss its importance. 3
- (b) Explain the functions of pulpers in coffee processing with a diagram 6
4. Discuss in details the different steps in coffee processing with the different sections in coffee berry. 1+8=9
5. (a) Explain the processing of cocoa in details. 6
- (b) Draw the product flowchart of cocoa beans. 3
6. Explain the different soil and other geographical conditions required for coffee cultivation. 9

