**Sardar Bhagwan Singh University Balawala, Dehradun**

**V assignment, M. Pharm II semester**

**School of Pharmaceutical Sciences and Technology**

**M.Pharm Pharmacognosy (1st year) II sem**

**Subject- Medicinal Plant Biotech**  **(MPG201-T)**

**Total Marks 30 Submission Date 26.04.2020**

Attempt all question

**Section A: multiple choice Questions (1 Mark each)**

Q. No. (1) the growth of plant tissues in artificial media is called\_\_\_\_\_\_\_\_\_\_\_
a) Gene expression b) Transgenesis
c) Plant tissue culture d) Cell hybridization

Q. No. (2). In plant tissue culture, what is the term ORGANOGENESIS means?

 a) Formation of callus culture b) Formation of root & shoot from callus culture

c) Genesis of organ d) None of the above

Q. No. (3). In a cell, protoplast consists of the following EXCEPT...?

a) Cell wall b) Cell membrane

c) Nucleus d) Cytoplasm

Q. No. (4). Organogenesis is

a) formation of callus tissue b) formation of root and shoots on callus tissue

c) both (a) and (b) d) genesis of organs

Q. No. (5). The ability of the component cells of callus to form a whole plant is known as

a) Redifferentiation b) Dedifferentiation

c) either (a) or (b) d) none of this

**Section B: True False questions (1 Mark each)**

Q. No. (1) A plant cell is a prokaryotic cell (true /false)

Q. No. (2) Osmoticum is added to stabilise the protoplasts (true /false)

Q. No. (3) The protoplast in culture can not regenerated into an entire plant (true /false)

Q. No. (4) The isolated protoplast is highly fragile (true /false)

Q. No. (5) Protoplast fusion can achived by Spontaneous fusion (true /false)

**Section C: Short answer questions (5Mark each)**

Q. No. (1)Write a short note on effect of plant growth regulators on organogenesis

Q. No. (2) Write a short note embryogenesis and explain its various stages of development

**Section D: Long answer question (10 mark)**

Q. No.(1) write a detail note on protoplast fussion and its role in development of medicinal plants