Unit 2 - Week 1 Introduction to Biomaterials and Biocompatibility

WEEK 1 ASSIGNMENT

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-14, 23:59 IST.

1) 1. Establishing biocompatibility of a material involves *1 point*

- *in vitro* study
- *in vivo* study
- Stem cell study
- both (i) and (ii)

No, the answer is incorrect.
Score: 0
Accepted Answers:
both (i) and (ii)

2) Ethical approvals are not required before *1 point*

- Stem cell experiments
- Clinical trials
- Animal trials
- Biomaterials Processing

No, the answer is incorrect.
Score: 0
Accepted Answers:
Biomaterials Processing

3) Biocompatibility study involves *1 point*

- Cell viability
- Cell growth
- Cell Differentiation
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

4) Cells, grown on biocompatible material will change its shape due to *1 point*

- cytokinesis
- chemokinesis
- cell apoptosis
- Material-protein interactions

No, the answer is incorrect.
Score: 0
Accepted Answers:
Material-protein interactions

5) compressive strength of a scaffold depends on *1 point*

- biomaterial composition
- processing
- scaffold porosity
- all of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
all of the above

6) Biological component/s that come in contact with the implant are *1 point*

- Cells
- Tissues
- Blood
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

7) Compatibility of material with blood is referred to as *1 point*

- Histocompatibility
- Cytocompatibility
- Haemocompatibility
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Haemocompatibility

8) If a material is biocompatible, but not bioactive, that means *1 point*

- No cell adhesion will take place at all
- Limited, but to a visible extent, cells will adhere
- Cells may not survive
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Limited, but to a visible extent, cells will adhere

9) In vitro experiments are preferred because they *1 point*

- Do not require regulatory approval
- Are rapid
- Help in initial screening
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

10) For biomedical applications, the property of utmost relevance is *1 point*

- Functional (Electric/Magnetic)
- Mechanical (Hardness/Strength)
- Cell and Tissue compatibility
- Optical Translucency

No, the answer is incorrect.
Score: 0
Accepted Answers:
Cell and Tissue compatibility

11) Biocompatibility of a material is *1 point*

- Dependant on target application
- Independant of target application
- Independant of material
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Dependant on target application

12) Which of the following can be a candidate material for hip joint application? *1 point*

- Copper
- Aluminum
- Titanium Alloys
- PLGA

No, the answer is incorrect.
Score: 0
Accepted Answers:
Titanium Alloys

13) Which of the following is widely used in making cardiovascular stents? *1 point*

- Tin (Sn)
- Nickel (Ni)
- Nickel-Titanium Alloy (Nitinol)
- High Density Polyethylene (HDPE)

No, the answer is incorrect.
Score: 0
Accepted Answers:
Nickel-Titanium Alloy (Nitinol)

14) The term biocompatibility encompasses *1 point*

- Cell type dependant response *in vitro*
- Animal dependant tissue response *in vivo*
- Blood Compatibility
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

15) A biocompatible material is NOT expected to encourage *1 point*

- Cell growth
- Tissue growth
- Adverse host response
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Adverse host response