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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2016/2017**

COURSE NAME : 3D MODELING  
COURSE CODE : BBU 30203  
PROGRAM CODE : BBF  
EXAMINATION DATE : JUNE 2017  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

**TERBUKA**

THIS EXAM PAPER CONSISTS OF FIVE (5) PAGES

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- Q1** (a) Discuss how Virtual Reality (VR) object is presented in user's brain according to the following representation:  
(i) 2-Dimensional (2D)  
(ii) 3-Dimensional (3D)  
(8 marks)
- (b) Elaborate the following terms that are normally used in 3D graphics:  
(i) Wireframes  
(ii) Rendering  
(iii) Texture Materials  
(12 marks)
- Q2** (a) Describe and draw three (3) of the following polygons:  
(i) Teapot  
(ii) Sphere  
(iii) Geosphere  
(12 marks)
- (b) Define what is Materials in Material Editor?  
(3 marks)
- (c) Discuss step by step procedure to assign materials to an object in 3D environment.  
(5 marks)
- Q3** (a) Elaborate four (4) ways that can be used to speed up the rendering process in 3 Studio Max  
(12 marks)
- (b) Discuss what is object motion blur in the scan line rendering process.  
(8 marks)
- Q4** (a) Discuss and draw the light beam for each of the following lights in 3D Studio Max?  
(i) Sky Light  
(ii) Omni Light  
(iii) Spot Light  
(12 marks)
- (b) Discuss on how to create a camera using the current view port in 3D environment?  
(8 marks)

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- Q5** (a) Define what is Track Bar in 3D Studio Max? (4 marks)
- (b) Ali wanted to change the animation timing from 120 seconds to 150 seconds. Elaborate how Ali should configure the animation timeline? (8 marks)
- (c) Are you agree with the virtual micro teaching used in your university? Explain how it gives impact to the learners? (8 marks)

**-END OF QUESTIONS-**

**TERBUKA**

# SULIT

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- S1** (a) Bincangkan bagaimana objek Realiti Maya (VR) dipaparkan di minda manusia mengikut representasi paparan berikut:
- (i) 2-Dimensi (2D)
  - (ii) 3-Dimensi (3D)
- (8 markah)
- (b) Huraikan terma yang kerap digunakan di dalam grafik 3D berikut:
- (i) *Wireframes*
  - (ii) *Rendering*
  - (iii) *Texture Materials*
- (12 markah)
- S2** (a) Bincangkan dan lukiskan tiga (3) jenis *polygon* seperti yang berikut:
- (i) *Teapot*
  - (ii) *Sphere*
  - (iii) *Geosphere*
- (12 markah)
- (b) Apakah definisi *Materials* di dalam *Material Editor*?
- (3 markah)
- (c) Bincangkan langkah-langkah menggunakan *materials* untuk objek di dalam persekitaran 3D?
- (5 markah)
- S3** (a) Huraikan empat (4) cara yang boleh digunakan untuk mempercepatkan proses *rendering* di dalam 3D Studio Max?
- (12 markah)
- (b) Bincangkan apakah *object motion blur* di dalam proses *scan line rendering*.
- (8 markah)
- S4** (a) Bincang dan lukiskan sinaran cahaya bagi setiap jenis pencahayaan yang digunakan di dalam Studio Max.
- (i) *Sky Light*
  - (ii) *Omni Light*
  - (iii) *Spot Light*
- (12 markah)
- (b) Bincangkan bagaimana menggunakan kamera dengan cara *current view port* di dalam persekitaran 3D?
- (8 markah)

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## SULIT

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- S5 (a) Apakah yang dimaksudkan dengan *Track Bar* di dalam 3D Studio Max? (4 markah)
- (b) Ali ingin menukar masa animasi daripada 120 saat ke 150 saat. Jelaskan bagaimana Ali boleh menukarkan masa animasi tersebut? (8 markah)
- (c) Adakah anda bersetuju dengan pengajaran mikro secara maya digunakan di universiti anda? Jelaskan bagaimana ia memberi impak kepada pelajar? (8 markah)

**-SOALAN TAMAT-**

**TERBUKA**