**Module Nine Quiz**

A researcher conducted an experiment on the effects of a new multivitamin on energy level, with a control group (received nothing), a placebo group, and an experimental group (received the multivitamin). An energy inventory that provided a measure of energy level on a 50-point scale was used, where 50 indicated an individual who feels high levels of a lack of energy. The ANOVA summary table follows, together with the mean energy level score for each condition.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | df | SS | MS | F |
| Between groups |  | 1,202.313 |  |  |
| Within groups |  | 2118.00 |  | ------ |
| Total |  | 3,320.313 | ------ | ------ |

|  |  |  |
| --- | --- | --- |
| Drug Condition | Mean | N |
| Control | 36.26 | 15 |
| Placebo | 33.33 | 15 |
| Multivitamin | 24.13 | 15 |

a) Complete the ANOVA summary table.

b) Is fobt significant at a = .05?

c) Perform post hoc comparisons if necessary.

d) What conclusions can be drawn from the F- ratio and the post hoc comparisons?

e) What is the effect size, and what does it mean?